

**K.S.R.M COLLEGE OF ENGINEERING**  
**(AUTONOMOUS)**

**SYLLABUS**  
**COMPARISION**

**FROM A.Y 2018-19 TO A.Y 2022-23**



# **K.S.R.M COLLEGE OF ENGINEERING**

**(AUTONOMOUS)**

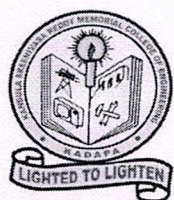
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### **SYLLABUS COMPARISION**

**A.Y 2022-23**

<b>S.NO</b>	<b>PROGRAMME NAME</b>
<b>1</b>	<b>Department of Civil Engineering</b>
<b>2</b>	<b>Department of Electrical &amp; Electronics Engineering</b>
<b>3</b>	<b>Department of Mechanical Engineering</b>
<b>4</b>	<b>Department of Electronics and Communication Engineering</b>
<b>5</b>	<b>Department of Computer Science Engineering</b>
<b>6</b>	<b>Department of Humanities and Sciences</b>





# K.S.R.M. COLLEGE OF ENGINEERING

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Department of Civil Engineering

## Syllabus comparison between R20UG and R18UG

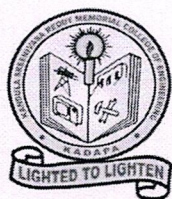
Programme: B. Tech.

Branch: Civil Engineering

Semester: V and VI

Sl. No.	Course code	Course Title	Percentage change in R20UG compared to R18UG
1	2001501	Hydrology & Irrigation	70
2	2001502	Foundation Engineering	0
3	2001503	Concrete Technology	5
4	2001504	Optimization Techniques in Civil Engineering	100
5	2001505	Advanced Structural Analysis	0
6	2001506	Remote Sensing & GIS	0
7	200E101	Disaster Management	0
8	200E102	Basics of Civil Engineering	100
9	200E103	Building Materials	50
10	2001507	Concrete Technology Lab	20
11	2001508	Structural Analysis and Design Lab (Staad Pro)	100
12	20015S3	SketchUp-3D modelling	100
13	2001601	Environmental Engineering	30
14	2001602	Water Resources Engineering	60
15	2001603	Design of Reinforced Concrete Structures	20
16	2001604	Pre-stressed Concrete	0
17	2001605	Bridge Engineering	0
18	2001606	Traffic Engineering	100
19	2001607	Environmental Engineering Lab	0





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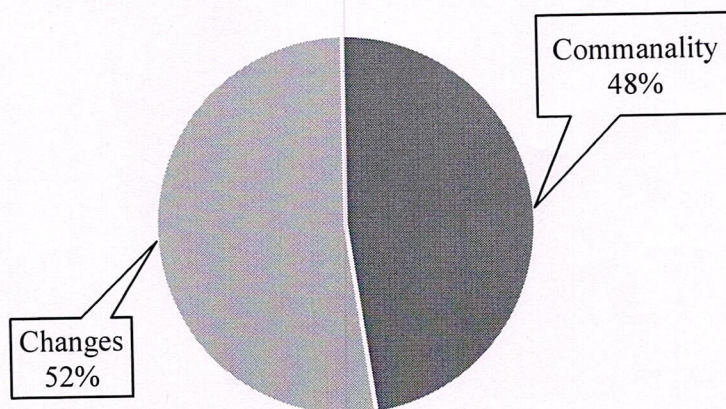
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20	2001608	Computer Aided Design and Drafting Lab	100
21	2001609	Advanced Concrete Technology Lab	100
22	20OE104	Solid Waste Management	100
23	20OE105	Estimation and Costing	100
24	20OE106	Water Management	100
Average Percentage change in Curriculum			52

## % change in R20UG compared to R18UG



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. N. Amaranatha Reddy	Associate Professor	
2.	Dr. G. Sreenivasa Reddy	Professor	
3.	Dr. V. Giridhar	Professor	
4.	Dr. T. Kiran Kumar	Professor	

HoD

Head

Department of Civil Engineering  
K.S.R.M. College of Engineering  
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Dean (Academics)





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Department of Civil Engineering

## Syllabus comparison between R22PG and R18PG

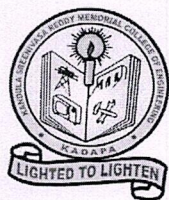
Programme: M. Tech.

Specialization: Geotechnical Engineering

Semester: I, II, III & IV

Sl. No.	Course code	Course Title	Percentage change in R22PG compared to R18PG
1	2212101	Advanced Soil Mechanics	0
2	2212102	Advanced Foundation Engineering	20
3	2212103	Soil Structure Interaction (PEC1)	20
4	2212104	Ground Improvement Techniques (PEC1)	100
5	2212105	Geoenvironmental Engineering (PEC1)	0
6	2212106	Critical Soil Mechanics (PEC2)	0
7	2212107	FEM in Geotechnical Engineering (PEC2)	0
8	2212108	Pavement Analysis and Design (PEC2)	0
9	2212109	Soil Mechanics - 1 Lab	13
10	2212110	Soil Mechanics - 2 Lab	50
11	2212111	Research Methodology & IPR	0
12	2270A01	English for Research Paper Writing (AC1)	0
13	2270A02	Disaster Management (AC1)	0
14	2270A03	Sanskrit for Technical Knowledge (AC1)	0
15	2270A04	Value Education	0
16	2212201	Experimental Geomechanics	0
17	2212202	Earth Retaining Structures	70
18	2212203	Dynamics of Soil and Foundations (PEC3)	85
19	2212204	Foundations on Expansive Soils (PEC3)	100





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20	2212205	Offshore Geotechnical Engineering (PEC3)	0
21	2212206	Design of Underground Excavations (PEC4)	0
22	2212207	Design with Geosynthetics (PEC4)	100
23	2212208	Geotechnical Earthquake Engineering (PEC4)	100
24	2212209	Subsoil Exploration Lab	34
25	2212210	Geotechnical Engineering Modeling Lab	90
26	2212211	Technical Seminar	100
27	2270A05	Constitution of India	0
28	2270A06	Pedagogy Studies	0
29	2270A07	Stress Management by Yoga	0
30	2270A08	Personality Development through Life Enlightenment Skills	0
31	2212301	Stability Analysis of Slopes (PEC5)	0
32	2212302	Foundations on Weak Rocks (PEC5)	0
33	2212303	Computational Geomechanics (PEC5)	0
34	22OE121	Solid Waste Management (OEC)	100
35	22OE122	Waste to Energy (OEC)	0
36	22OE123	Sub soil exploration techniques (OEC)	100
37	2212307	Dissertation Phase 1	0
38	2212308	Co-Curricular Activities	100
39	2212401	Dissertation Phase 2	0
<b>Average Percentage change in Curriculum</b>			<b>30</b>





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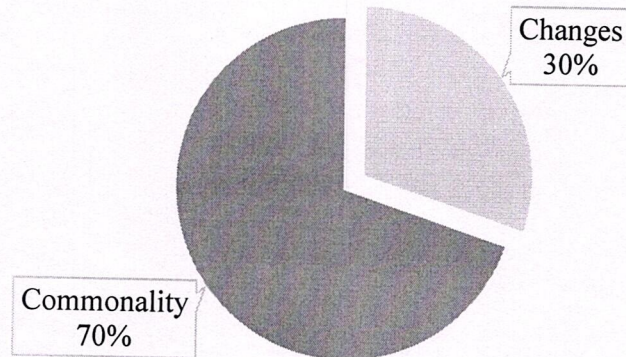
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## % change in R22PG compared to R18PG



### Internal Evaluation Committee:

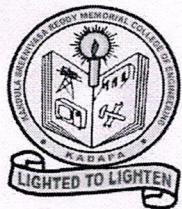
S.No	Name of the Faculty	Designation	Signature
1.	Dr. N. Amaranatha Reddy	Associate Professor	
2.	Dr. G. Sreenivasa Reddy	Professor	
3.	Sri. P. Suresh Praveen Kumar	Assistant Professor	
4.	Sri. P. Rajendra Kumar	Assistant Professor	

HoD

Head  
Department of Civil Engineering  
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Dean  
(Academics)





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Department of Electrical and Electronics Engineering

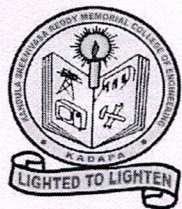
**Sub:** Syllabus comparison between R20UG and R18UG

**Programme:** B. Tech.

**Semester:** V and VI

Sl. No.	Course code	Course Title	Percentage change in R20UG compared to R18UG
		<b>V Semester</b>	
1.	2002501	Linear Digital IC Applications	00
2.	2002502	Power System - II	10
3.	2002503	Power Electronics	10
4.	2002504	Internet of Things	100
5.	2002505	Modern Control Theory	05
6.	2002506	Energy Conversion Systems	00
7.	2002507	Power Systems - I Lab	00
8.	2002508	Internet of Things Lab	20
9.	2025509	Advanced English Communication Skills (Soft Skill Oriented Course)	100
10.	2002510	Community Service Project	100
11.	20OE201	Modern Control Theory(OE-I)	100
12.	20OE202	Programming Fundamentals for Numerical Computations(OE-I)	100
13	20MC512	Constitution of India	0
		<b>VI Semester</b>	
14.	2002601	Microprocessor & Microcontrollers	10
15.	2002602	Fundamentals of Electric Drives	0
16.	2002603	Switchgear & Protection	10





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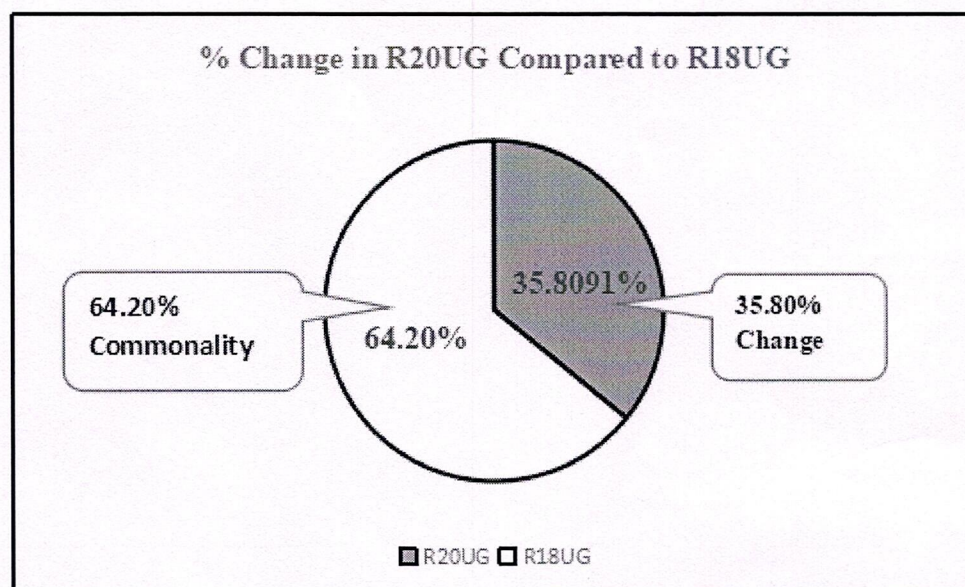
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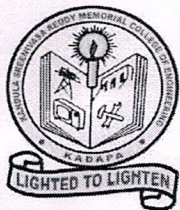
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17.	2002604	Power System Operation & Control	05
18.	2002605	HVDC Transmission	5
19.	2002606	Signals & Systems	00
20.	2002607	Power Electronics Lab	00
21.	2002608	Power System- II Lab	00
22.	2004609	LABVIEW Programming	20
23.	2002610	MATLAB – SIMULINK Skill Advanced Course	100
24.	20OE203	Energy Conversion Systems (OE-II)	100
25.	20OE204	Smart Grid (OE-II)	100
Average Percentage change in Curriculum			35.80







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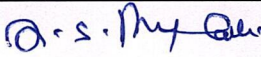
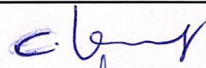
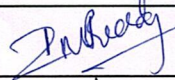
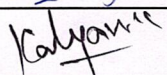
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## Internal Evaluation Committee:

S.No.	Name of the Faculty	Designation	Signature
1.	Dr. M.S.Priyadarshini	Professor & HOD	
2.	Dr. C. Kumar Reddy	Associate Professor	
3.	Mr. K. Rama Mohan Reddy	Associate Professor	
4.	Mr. K.Kalyan Kumar	Assistant Professor	



HOD

HEAD

Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Kadapa -516003.



Dean Academics





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Department of Electrical and Electronics Engineering

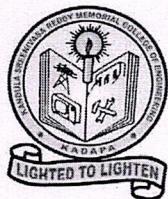
Sub: Syllabus comparison between R22PG and R18PG

Programme: M. Tech.

Specialization: Power Systems

Sl. No.	Course code	Course Title	Percentage change in R22 compared to R18
		<b>I Semester</b>	
1.	2252101	Advanced Power System Protection	05
2.	2252102	Power System Dynamics - I	05
3.	2252103	Energy Conversion Systems	05
4.	2252104	Smart grid Technologies	05
5.	2252105	Wind and Solar Energy Systems	05
6.	2252106	Electrical Power Distribution System	00
7.	2252107	Mathematical Methods in Power Engineering	10
8.	2252108	Electric and Hybrid Vehicles	10
9.	2252109	Research Methodology and IPR	00
10.	2252110	Power System Lab - I	00
11.	2252111	Power System Simulation Lab-I	05
		<b>Audit Course I</b>	
12.	2270A01	English for Research Paper Writing	00
13.	2270A02	Disaster Management	00
14.	2270A03	Sanskrit for Technical Knowledge	00
15.	2270A04	Value Education	00
		<b>II Semester</b>	
16.	2252201	Power System Security and State Estimation	100
17.	2252202	Power System Dynamics - II	10





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18.	2252203	Restructured Power Systems	05
19.	2252204	Energy Auditing and Management	15
20.	2252205	Electrical Machine Design	10
21.	2252206	SCADA System and Applications	05
22.	2252207	Electrical Power Quality	10
23.	2252208	Power System Reliability	100
24.	2252209	Technical Seminar	100
25.	2252210	Power System Lab – II	00
26.	2252211	Power System Simulation Lab-II	15
		<b>Audit Course II</b>	
27.	2270A05	Constitution of India	00
28.	2270A06	Pedagogy Studies	00
29.	2270A07	Stress Management by Yoga	00
30.	2270A08	Personality Development through Life Enlightenment Skills	00
		<b>III Semester</b>	
31.	2252301	Power System Transients	10
32.	2252302	Industrial Load Modeling and Control	10
33.	2252303	Modern Control Theory	10
34.	22OE521	Internet of Things(OE)	100
35.	22OE522	Programmable Logic Controller (PLC) & its Applications(OE)	100
36.	22OE523	Power Electronics For Renewable Energy Systems(OE)	100
37.	2252307	Dissertation Phase - I	00
38.	2252308	Co-curricular Activity	100
<b>Average Percentage change in Curriculum</b>			<b>22.36</b>





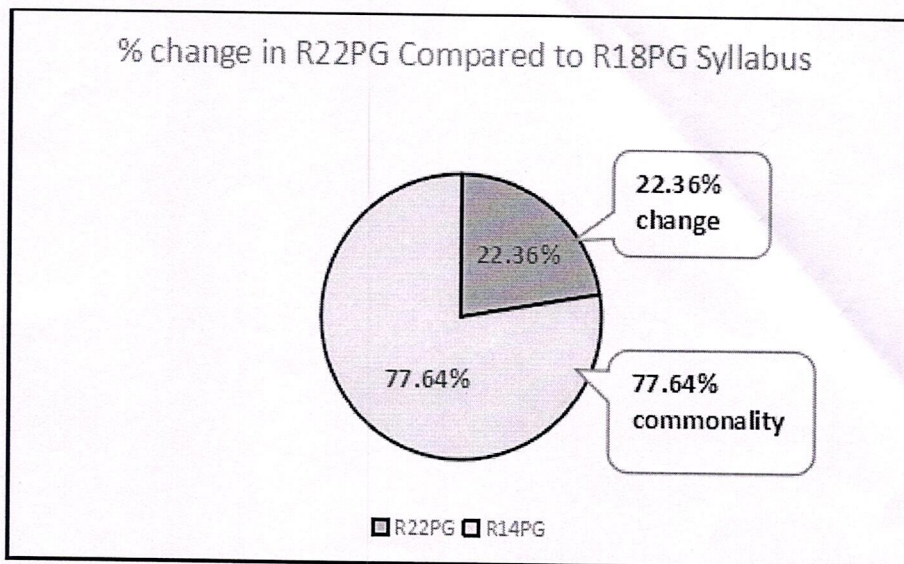
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## Internal Evaluation Committee:

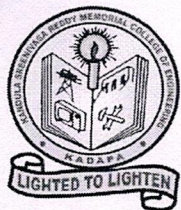
S.No.	Name of the Faculty	Designation	Signature
1.	Dr. K.Amaresh	Professor & HOD	<i>Amaresh</i>
2.	Mr.M.Basker Reddy	Associate Professor	<i>Basker Reddy</i>
3.	Mr. K. Rama Mohan Reddy	Associate Professor	<i>Ram Mohan Reddy</i>
4.	Mr. K.Kalyan Kumar	Assistant Professor	<i>Kalyan Kumar</i>

*Amaresh*  
HOD

*MA Basker Reddy*  
Dean Academics

HEAD  
Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Kadapa -516003.





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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R20UG and R18UG (AY 2022-2023)

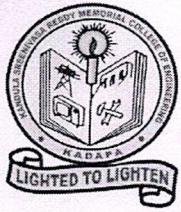
Programme: B. Tech.

Branch: Mechanical Engineering

Semester: V and VI

Sl. No.	Course code	Course Title	Percentage change in R20UG compared to R18UG
1	2003501	Heat Transfer	0
2	2003502	Design of Machine Members	50
3	2003503	Metrology and Measurements	100
4	2003504	Alternative Fuels and Emission Control in Auto motives	100
5	2003505	Automation & Robotics	75
6	2003506	Tool Design	100
7	2003507	Power Plant Engineering	50
8	2003508	Non Destructive Testing (NDT)	100
9	200E301	Introduction to Hybrid and Electric Vehicles	100
10	200E302	Rapid Prototyping	100
11	200E303	Design for Manufacturing and Assembly	100
12	200E304	Energy systems engineering	100
13	200E305	Smart Materials	100
14	2003514	Metrology and Measurements Lab	50
15	2003515	Heat Transfer Lab	10
16	2003516	ANSYS (Skill oriented course- III)	100
17	2003517	Social relevant Project	100
18	2003601	Operations Research	10
19	2003602	Finite Element Methods (FEM)	10





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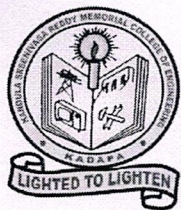
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20	2003603	Introduction to CAD/CAM	10
21	2003604	Dynamics of machinery	10
22	2003605	Solar and Wind Energy Systems	50
23	2003606	Computational Fluid Dynamics (CFD)	50
24	2003607	Six Sigma and Lean manufacturing	100
25	2003608	Energy Auditing	100
26	200E306	Automotive Electronics, Sensors & Drives	100
27	200E307	Robotics and Applications in Manufacturing	25
28	200E308	Sensors in Intelligent Manufacturing	100
29	200E309	Non-Conventional sources of energy	10
30	200E310	Supply Chain Management	10
31	2003614	Computer Aided Machine Laboratory	100
32	2003615	Computer Aided Drafting Laboratory	100
33	2003616	Solid Works	100
Average Percentage change in Curriculum			67.27





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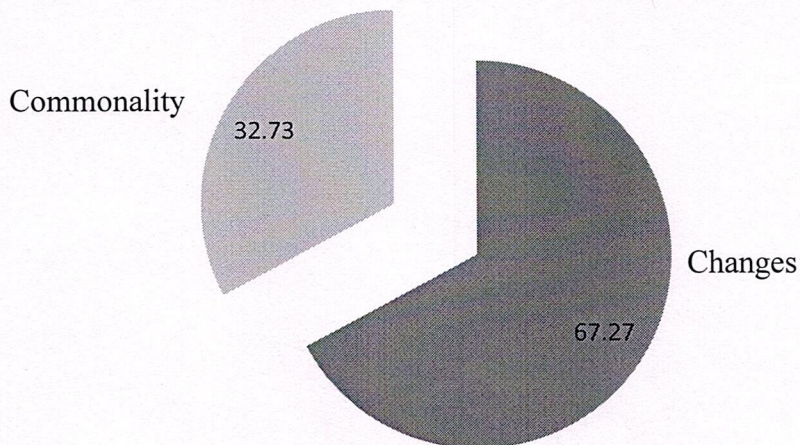
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## % Syllabus Change in R20UG Compared to R18UG



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. D. Ravi KAnth	Professor	
2.	Dr. Shakeel Ahamed	Associate Professor	
3.	K.Suresh Kumar	Associate Professor	
4.	Dr. P. Sreenivas	Associate Professor	

HoD

Professor & Head  
Department of Mechanical Engineering  
K.S.R.M. College of Engineering  
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## Department of Mechanical Engineering Syllabus comparison between R22PG and R18PG (AY 2022-2023)

Program: M. Tech.

Specialization: Renewable Energy

Semester: I, II, III & IV

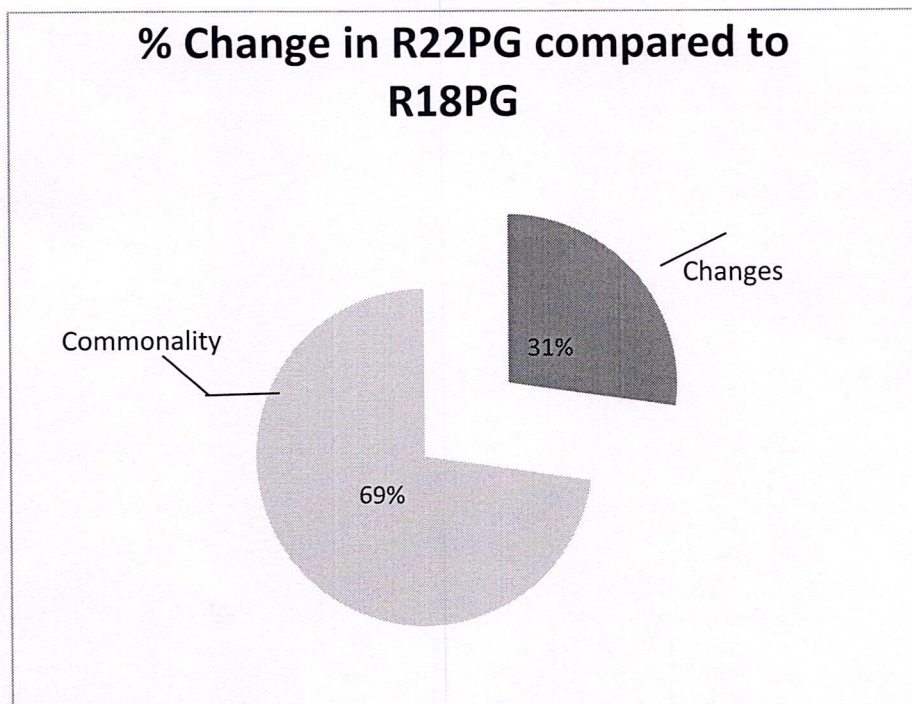
S. No.	Course code	Course Title	Percentage change in R22PG compared to R18PG
1	2299101	Advanced Thermodynamics and Fluid Mechanics	20
2	2299102	Introduction to Renewable Energy Systems	20
3	2299103	Hydrogen and Fuel Cell Technologies	20
4	2299104	Wind Energy Technology	20
5	2299105	Process Modeling and Simulation in Renewable Energy Systems	20
6	2299106	Energy Storage Technology	20
7	2299107	Energy Conservation by Waste Heat Recovery	30
8	2299108	Developing Energy Efficiency and Renewable Energy Projects	30
9	2299109	Fuels Lab	100
10	2299110	Solar Lab	100
11	2299111	Research Methodology & IPR	40
12	2270A05	Disaster Management	0



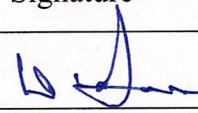
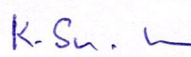
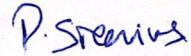
13	2270A05	Constitution of India	0
14	2270A05	Stress Management by Yoga	0
15	2299201	Energy Audit and Management	0
16	2299202	Computational Fluid Dynamics	30
17	2299203	Energy Storage Technology	20
18	2299204	Energy Conservation by Waste Heat Recovery	25
19	2299205	Developing Energy Efficiency and Renewable Energy Projects	25
20	2299206	Hydrogen and Fuel Cell Technologies	0
21	2299207	Solar Energy Technology	30
22	2299208	Process Modeling and Simulation in Renewable Energy Systems	0
23	2299209	Wind Energy Lab	100
24	2299210	Control Systems and Simulation Lab	100
25	2299211	Technical Seminar	100
26	2270A06	Sanskrit for Technical Knowledge	0
27	2270A07	Pedagogy Studies	0
28	2270A08	English for Research Paper Writing	0
29	2299301	Economics and Financing of Renewable Energy Systems	20
30	2299302	Environmental Engineering and Pollution Control	25
31	2299303	Fuels and Combustion Technology	25
32	22OE991	Electric Vehicle Technology	100
33	22OE992	Operations Research	0
34	22OE993	Composite Materials	0
35	2299307	Dissertation Phase – 1	0
36	2299308	Co-Curricular Activities	100
37	2299401	Dissertation Phase - 2	0

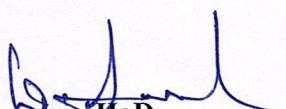


Average Percentage change in Curriculum	31
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**Internal Evaluation Committee:**

S.No	Name of the Faculty	Designation	Signature
1.	Dr. D. Ravikanth	Professor	
2.	K. Suresh Kumar	Associate Professor	
3.	Dr. P. Sreenivas	Associate Professor	

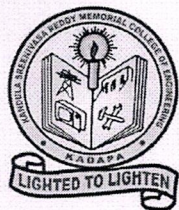
  
HoD

Professor & Head  
Department of Mechanical Engineering  
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Department of Electronics and Communication Engineering

## Syllabus comparison between R20UGand R18UG

Programme: B. Tech

Branch: Electronics and Communication Engineering

Semester : V and VI

S. No.	Course code	Course Title	Percentage change in R18 compared to R20
1	2004501	Embedded systems and IoT	20
2	2004502	Communication Systems	40
3	2004503	Antennas and Wave Propagation	0
4	2004504	Electronic Measurements and Instrumentation	0
5	2004505	Computer Architecture and Organization	60
6	2004506	Optical Communication	10
7	2004510	Communication Systems Lab	10
8	2004511	Embedded systems and IoT lab	50
9	20SC508	Introduction to Machine learning using Python	100
10	2004601	Digital Signal Processing(DSP)	10
11	2004602	Microwave Engineering	10
12	2004603	Control Systems	10
13	2004604	CMOS VLSI Design	20
14	2004605	Information Theory & Coding	0
15	2004606	Sensors and Actuators	100
16	2004609	VLSI Design Laboratory	100
Average change			34%





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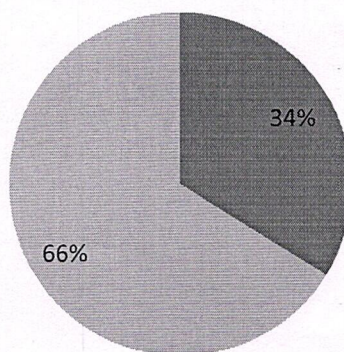
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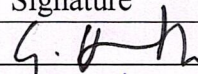
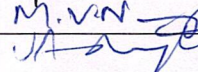
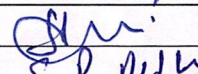
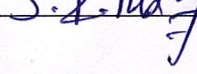
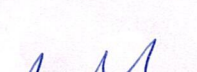


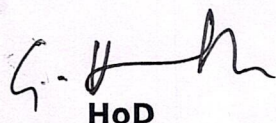
## Syllabus comparison between R20UGand R18UG

■ Change ■ Commonality



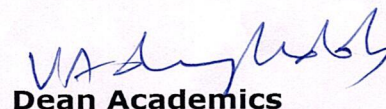
### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
2.	Dr. M. V. Narayana	Professor	
3.	Dr. V. Adinarayana Reddy	Professor	
4.	Sri R. V. Sreehari	Assoc. Professor	
5.	Dr. S. L. Prathapa Reddy	Assoc. Professor	

  
HoD

Professor & H.O.D.  
Department of E.C.E.

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## Syllabus Comparison between R22PG and R18PG, AY 2022-23

Programme: M. Tech

Specialization: Embedded Systems and VLSI

### Course Structure

Semesters: I to IV

S.no.	Course Code	Course Title	Percentage of change in R22 PG compared to R18 PG
1	2284101	RTL Simulation and Synthesis With PLDs	0
2	2284102	Microcontrollers and Programmable Digital Signal Processors	0
3	2284103	Research methodology and IPR	0
4	2284104	Parallel Processing (PEC-I)	0
5	2284105	Digital Signal and Image Processing (PEC-I)	20
6	2284108	Programming Languages for Embedded Systems(PEC-II)	0
7	2284110	CAD of Digital System(PEC-II)	25
8	2284111	CPLD, FPGA Architectures and Applications. (PEC-II)	30
9	2284112	RTL Simulation and Synthesis with PLDs Lab Lab	0
10	2284113	Microcontrollers and Programmable Digital Signal Processors Lab Lab	0
11	2270A01	English for Research Paper Writing(AC-I)	0
	2270A02	Disaster Management(AC-I)	0
12	2270A04	Values for Professional Ethics(AC-I)	0
13	2270A05	Constitution of India(AC-I)	0
14	2284203	Memory Architectures(PEC-III)	15
15	2284204	Advanced Computer Architecture(PEC-III)	40
16	2284205	SoC Design(PEC-III)	15
17	2284206	Low Power VLSI Design(PEC-III)	0
18	2284207	Communication Buses and Interfaces (PEC-IV)	40



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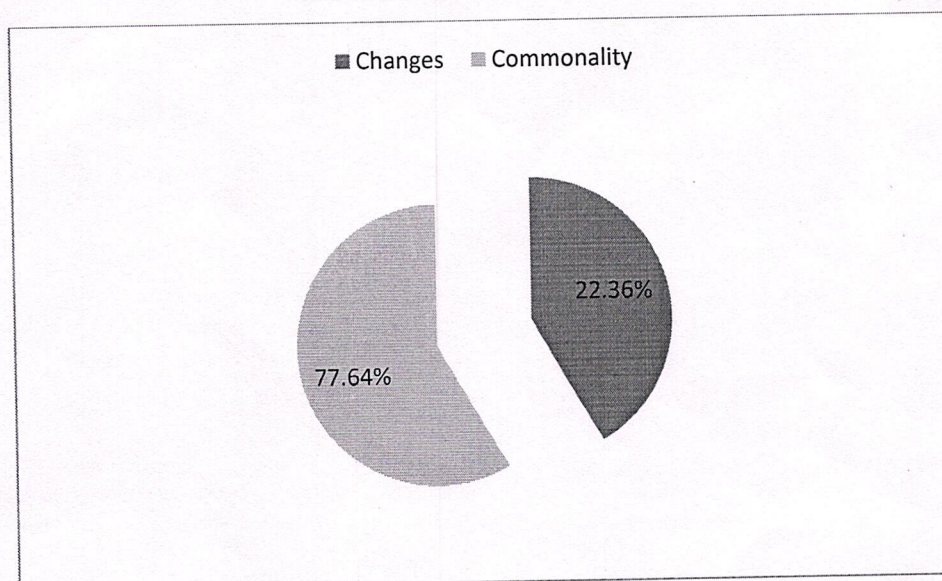
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19	2284208	Network Security and Cryptography (PEC-IV)	0
20	2284208	Physical design automation (PEC-IV)	20
21	2284209	Nano Electronics (PEC-IV)	0
22	2284211	Analog and Digital CMOS VLSI Design Lab Lab	0
23	2284212	Real Time Operating System slab	0
24	22284213	Technical seminar	100
25	2270A06	Pedagogy Studies(AC-II)	0
26	2270A07	Stress Management by Yoga(AC-II)	0
27	2270A08	Personality Development through Life Management Skills(AC-II)	0
28	2284301	IOT and its Applications (PEC-V)	0
29	2284302	Hardware Software co-design (PEC-V)	0
30	2284303	Artificial Intelligence (PEC-V)	0
31	22OE841	Nano Electronics (OEC)	100
32	22OE842	Introduction to VLSI (OEC)	100
33	22OE843	Introduction to IoT (OEC)	100
34	2284311	Dissertation Phase – I	0
35	2254312	Co-curricular Activities	100
36	2284401	Dissertation Phase – II	0
Average Percentage Changes in Curriculum			22.36%

**Graph of changed incorporated in R22PG Syllabus compared with R18PG Syllabus**

**M.Tech I Sem to IV Sem**



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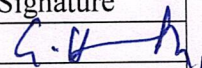
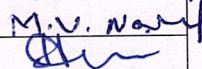
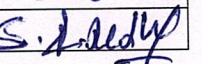
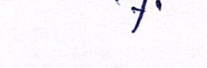
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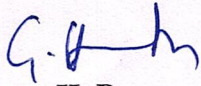


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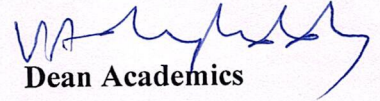
## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
2.	Dr. M. V. Narayana	Professor	
3.	Sri R. V. Sreehari	Assoc. Professor	
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	



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## Syllabus Comparison between R20UG and R18UG, AY 2022-23

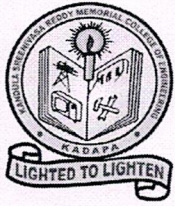
Programme: B.Tech

Branch: Computer Science & Engineering

Semester: V and VI

S.No	Course Code	Course Title	Percentage of change in R20UG compared to R18UG
1	2005501	Software Engineering	0
2	2005502	Design and Analysis of Algorithms	10
3	2005503	Computer Networks	0
4	200E501	Data Structures (OEC-I)	20
5	200E502	Database Management Systems (OEC-I)	50
6	2005504	Web Technologies (PEC-I)	100
7	2005505	Multimedia Systems (PEC-I)	0
8	2005506	Distributed Systems (PEC-I)	0
9	2005507	DAA Lab	100
10	2005508	Professional Elective Course -I Lab	100
11	2005510	Community Service Project	100
12	2005601	Internet of Things	10
13	2005602	Data Mining	0
14	2005603	Cryptography & Network Security	100
15	200E503	Java Programming (OEC-II)	100
16	200E504	Web Designing (OEC-II)	80
17	2005604	Artificial Intelligence (PEC-II)	0
18	2005605	Software Testing (PEC-II)	0
19	2005606	Adhoc & Sensor Networks (PEC-II)	100
20	2005607	IOT Lab	10
21	2005608	Data Mining Lab	100
22	2005609	Network Security Lab	100
23	2005610	Mobile Application Development (Skill Oriented Course)	30
Average Percentage Changes in Curriculum (%)			48.26





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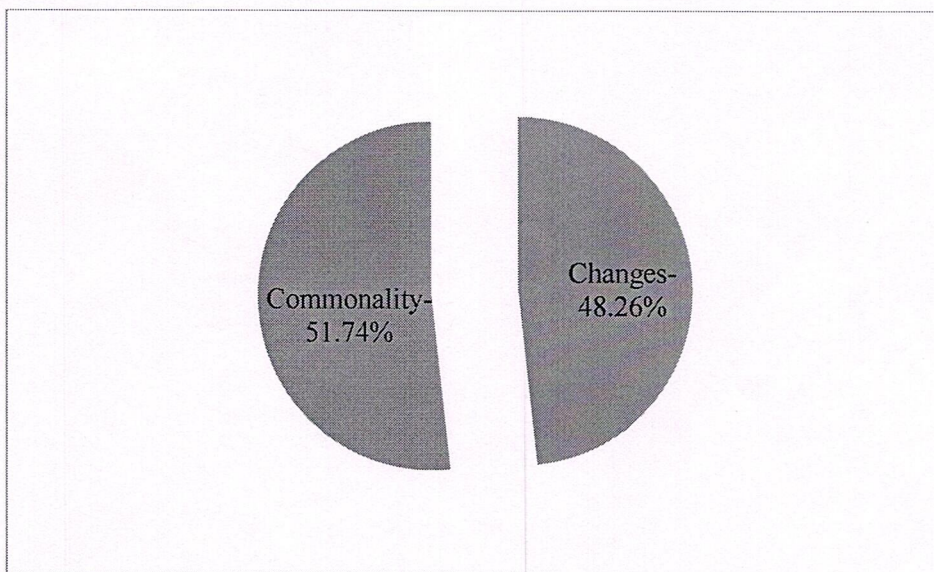
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## Percentage change in R20UG Syllabus Compared to R18UG Syllabus

### B.Tech V Semester and VI Semester



#### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.V.Lokeswara Reddy	Professor & HOD	
2	Dr.M.Sreenivasulu	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Dr. S. Nageswara Rao	Associate Professor	

HoD/ CSE

**Dr. V. LOKESWARA REDDY**

M.Tech., Ph.D.,

Professor & HOD CSE

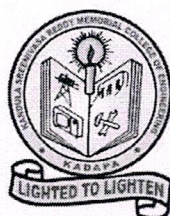
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**UG Programs in Engineering (R20UG)**  
**Curriculum and Syllabus for**  
**I - VIII Sem B.Tech**  
**Department of Computer Science and Engineering**



**Kandula Srinivasa Reddy Memorial College of Engineering (Autonomous)**  
**Kadapa 516003 AP**  
**(Approved by AICTE, Affiliated to JNTUA, Ananthapuramu, Accredited by**  
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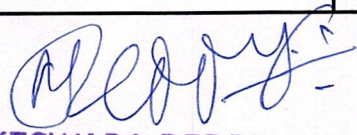
Semester-0(Theory-8, Lab-7) Induction Program

S.No	Course Name	Category	L	T	P	C
1	Physical Activities-Sports, Yoga & Meditation, plantation	MC	0	0	6	0
2	Career Counseling	MC	2	0	2	0
3	Orientation to all branches-career options, tools etc.	ESC	3	0	0	0
4	Orientation on admitted branch-corresponding labs, tools & platforms	EC	2	0	3	0
5	Proficiency Modules & Productivity Tools	ES	2	1	2	0
6	Assessment on basic aptitude and mathematical skills	MC	2	0	3	0
7	Remedial Training in foundation courses	MC	2	1	2	0
8	Human values & Professional ethics	MC	3	0	0	0
9	Communication skills-focus on listening, speaking, reading, writing skills	BS	2	1	2	0
10	Concepts of programming	ES	2	0	2	0

L-Lecture, T-Tutorial, P-Practical

I Semester (Theory- 5, Labs-04)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021101	Linear Algebra and Calculus	BSC	3	0	0	40	60	3
2	2023102	Chemistry	BSC	3	0	0	40	60	3
3	2005103	C-Programming & Data Structure	ESC	3	0	0	40	60	3
4	2014104	Basic Electrical & Electronics Engineering	ESC	3	0	0	40	60	3
5	20EW105	Engineering Workshop	ESC	0	0	3	40	60	1.5
6	2005106	IT Workshop	ESC	0	0	3	40	60	1.5
7	2023107	Chemistry Lab	BSC	0	0	3	40	60	1.5
8	2005108	C-Programming & Data Structures Lab	ESC	0	0	3	40	60	1.5
9	2014109	Basic Electrical & Electronics Engineering Lab	ESC	0	0	3	40	60	1.5
<b>Total</b>				<b>12</b>	<b>00</b>	<b>15</b>	<b>360</b>	<b>540</b>	<b>19.5</b>

  
**Dr. V. LOKESWARA REDDY**  
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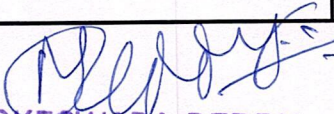


## II Semester (Theory-05, Lab-04)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021201	Differential Equations & Vector Calculus	BSC	3	0	0	40	60	3
2	20AP202	Applied Physics	BSC	3	0	0	40	60	3
3	2024203	Communicative English	HS MC	3	0	0	40	60	3
4	2005204	Python Programming	ESC	3	0	0	40	60	3
5	2003205	Engineering Drawing	ESC	1	0	2	40	60	2
6	2003206	Engineering Drawing Lab	ESC	0	0	2	40	60	1
7	20AP207	Applied Physics Lab	BSC	0	0	3	40	60	1.5
8	2024208	Communicative English Lab	HS MC	0	0	3	40	60	1.5
9	2005209	Python Programming Lab	ESC	0	0	3	40	60	1.5
10	20MC210	Environmental Science	MC	3	0	0	40	00	0.0
<b>Total</b>				<b>16</b>	<b>00</b>	<b>13</b>	<b>390</b>	<b>540</b>	<b>19.5</b>

## III Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2024301	Business Economics and Accounting for Engineers	HSM C	3	0	0	40	60	3
2	2005302	Advanced Data Structures	PCC	3	0	0	40	60	3
3	2005303	Formal Languages & Automata Theory	PCC	3	0	0	40	60	3
4	2005304	Object Oriented Programming through JAVA	PCC	3	0	0	40	60	3
5	2005305	Data Base Management Systems	PCC	3	0	0	40	60	3
6	2005306	Advanced Data Structures Lab	PCC	0	0	3	40	60	1.5
7	2005307	JAVA Lab	PCC	0	0	3	40	60	1.5
8	2005308	Data Base Management Systems Lab	PCC	0	0	3	40	60	1.5
9	2005309	Skill Oriented Course Exploring Data Analysis with R/ NASSCOM Courses	SC	0	0	4	40	60	2.0
<b>Total</b>				<b>15</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>540</b>	<b>21.5</b>

  
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IV Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005401	Principles of Operating Systems	PCC	3	0	0	40	60	3
2	2005402	Computer Organization	PCC	3	0	0	40	60	3
3	2004403	Microprocessors & Microcontrollers	ESC	3	0	0	40	60	3
4	2005404	Digital Logic Circuits & Design	PCC	3	0	0	40	60	3
5	2021405	Probability Theory & Statistical Methods	BSC	3	0	0	40	60	3
6	2014406	Microprocessors & Microcontrollers Lab	ESC	0	0	3	40	60	1.5
7	2005407	Principles of Operating Systems Lab	PCC	0	0	3	40	60	1.5
8	2005408	Digital Logic Design Lab	PCC	0	0	3	40	60	1.5
9	2005409	Skill Oriented Course Advanced Python Programming/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	2024410	Universal Human Values	HSMC	3	0	0	40	60	3.0
<b>Total</b>				<b>18</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>600</b>	<b>24.5</b>

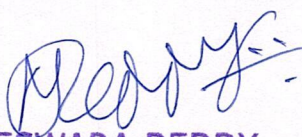


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V Semester (Theory-05, Lab-02)

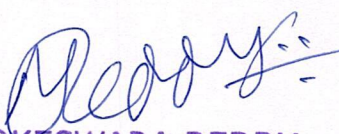
S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005501	Software Engineering	PCC	3	0	0	40	60	3
2	2005502	Design and Analysis of Algorithms	PCC	3	0	0	40	60	3
3	2005503	Computer Networks	PCC	3	0	0	40	60	3
		Open Elective Course-I(OEC-I)							
4	20OE501	Data Structures	OEC	3	0	0	40	60	3
	20OE502	Database Management Systems	OEC	3	0	0	40	60	3
		Professional Elective Course –I (PEC-I)							
5	2005504	Web Technologies	PEC	3	0	0	40	60	3
	2005505	Multimedia Systems	PEC	3	0	0	40	60	3
	2005506	Distributed Systems	PEC	3	0	0	40	60	3
6	2005507	DAA Lab	PCC	0	0	3	40	60	1.5
7	2005508	Professional Elective Course -I Lab	PCC	0	0	3	40	60	1.5
8	20245SC	Soft Skill Oriented Course Advanced English & Communication Lab/Professional Communication Lab	SC	0	0	4	40	60	2.0
9	2005510	Community Service Project	PROJ	0	0	0	100		1.5
10	20MC509	Constitution of India	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>10</b>	<b>420</b>	<b>480</b>	<b>21.5</b>

  
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VI Semester (Theory-05, Lab-03)


S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2005601	Internet of Things	PCC	3	0	0	40	60	3
2	2005602	Data Mining	PCC	3	0	0	40	60	3
3	2005603	Cryptography & Network Security	PCC	3	0	0	40	60	3
		Open Elective Course -II(OEC-II)							
4	200E503	Java Programming	OEC	3	0	0	40	60	3
	200E504	Web Designing	OEC	3	0	0	40	60	3
		Professional Elective Course – II (PEC-II)							
5	2005604	Artificial Intelligence	PEC	3	0	0	40	60	3
	2005605	Software Testing	PEC	3	0	0	40	60	3
	2005606	Adhoc & Sensor Networks	PEC	3	0	0	40	60	3
6	2005607	IOT Lab	PCC	0	0	3	40	60	1.5
7	2005608	Data Mining Lab	PCC	0	0	3	40	60	1.5
8	2005609	Network Security Lab	PCC	0	0	3	40	60	1.5
9	2005610	Skill Oriented Course Mobile Application Development/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	20MC612	Management Organizational Behavior	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>13</b>	<b>440</b>	<b>540</b>	<b>21.5</b>

  
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VII Semester (Theory-06)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
		Professional Elective Course-III (PEC-III)							
1	2005701	Compiler Design	PEC	3	0	0	40	60	3
	2005702	Computer Graphics	PEC	3	0	0	40	60	3
	2005703	Cyber Security	PEC	3	0	0	40	60	3
		Professional Elective Course-IV (PEC-IV)							
2	2005704	Machine Learning	PEC	3	0	0	40	60	3
	2005705	Object Oriented Analysis & Design	PEC	3	0	0	40	60	3
	2005706	Natural Language Processing	PEC	3	0	0	40	60	3
		Professional Elective Course-V (PEC-V)							
3	2005707	Cloud Computing	PEC	3	0	0	40	60	3
	2005708	Deep Learning	PEC	3	0	0	40	60	3
	2005709	Computer Vision	PEC	3	0	0	40	60	3
		Open Elective Course-III(OEC-III)							
4	20OE505	Operating System	OEC	3	0	0	40	60	3
	20OE506	R Programming	OEC	3	0	0	40	60	3
		Open Elective Course-IV(OEC-IV)							
5	20OE508	Python Programming	OEC	3	0	0	40	60	3
	20OE509	Cloud Computing	OEC	3	0	0	40	60	3
		Humanities & Social Science Elective							
6	2006701	Human Resource Development	HSM C	3	0	0	40	60	3
	2006702	Digital Marketing	HSM C	3	0	0	40	60	3
	2006703	Project Management	HSM C	3	0	0	40	60	3
7	2005710	Skill Oriented Course Big Data Technologies/ NASSCOM Courses	SC	0	0	4	40	60	2
8	2005711	Internship	INT	0	0	0	100	0	3
<b>Total</b>				<b>18</b>	<b>00</b>	<b>4</b>	<b>380</b>	<b>420</b>	<b>23</b>

  
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# VIII Semester

S.No	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005801	Major Project/ Internship (6Months)	PROJ	0	0	24	40	60	12
Total									12

## Structure of the Undergraduate Engineering Program:

S.No.	Category	Code	Credits	APSCHE Suggested Credits
1	Humanities & Social Sciences including Management Sciences	HSMC	10.5	10
2	Basic Science Courses	BSC	18	21
3	Engineering Science Courses	ESC	24	24
4	Professional Core Courses	PCC	54	51
5	Open Elective Courses	OEC	12	12
6	Professional Elective Courses	PEC	15	15
7	Internship & Project Work	PROJ	16.5	17
8	Mandatory Courses	MC	03	Non-Credit
9	Skill Oriented Courses	SC	10	10
	Total Credits		163	160

  
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## Department of Computer Science and Engineering Syllabus Comparison between R22PG and R18PG, AY 2022-23

Programme: M.Tech

Specialization: Artificial Intelligence and Data Science

Semester: I to IV

S.no.	Course Code	Course Title	Percentage of change in R22 PG compared to R18 PG
1	2298101	Machine Learning	0
2	2298102	Artificial Intelligence	0
3	2298103	Big Data Analytics (PEC-I)	0
4	2298104	Information retrieval (PEC-I)	0
5	2298105	Natural Language Processing(PEC-I)	100
6	2298106	Data Visualization Techniques (PEC-II)	0
7	2298107	Distributed Systems (PEC-II)	100
8	2298108	Medical Image Processing (PEC-II)	100
9	2298109	AI & ML Lab	0
10	2298110	Advanced Python Programming Lab	100
11	2284103	Research Methodology & IPR	0
12	2298201	Data Science	0
13	2298202	Deep Learning	0
14	2298203	Block Chain Technology(PEC-III)	100
15	2298204	Exploratory Data Analysis using R(PEC-III)	0
16	2298205	Video Analytics(PEC-III)	100
17	2298206	Text Mining & Time Series Data Analysis (PEC-IV)	40
18	2298207	Social Media Analysis (PEC-IV)	100
19	2298208	Artificial Intelligence in Cyber Security(PEC-IV)	0
20	2298209	Deep Learning Lab	0
21	2298210	Professional Elective Course Lab	0
22	2298211	Technical seminar	100
23	2270A01	English for Research Paper Writing(Audit Course)	0



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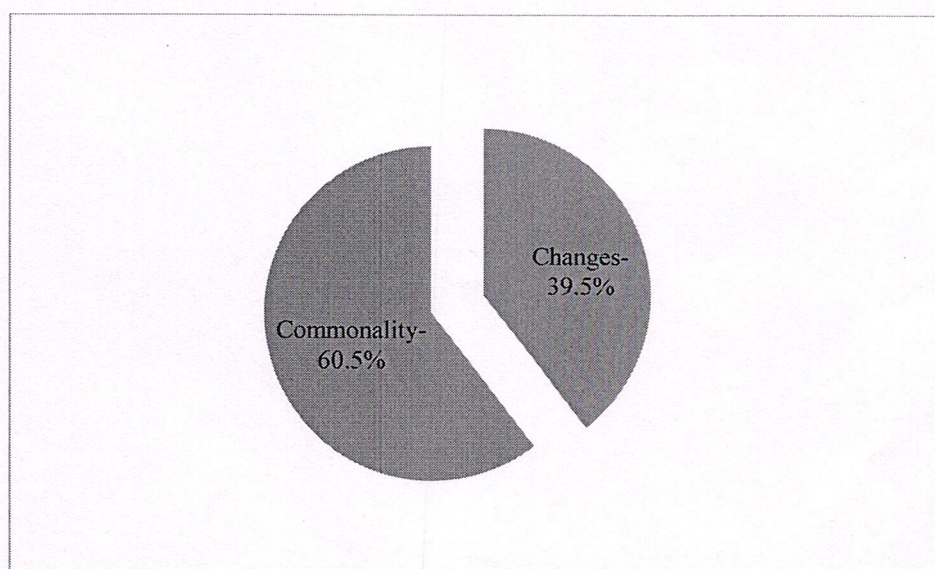


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24	2270A02	Disaster Management (Audit Course)	0
25	2270A03	Sanskrit for Technical Knowledge (Audit Course)	0
26	2270A04	Values for Professional Ethics(Audit Course)	0
27	2270A05	Constitution of India (Audit Course)	0
28	2270A06	Pedagogy Studies (Audit Course)	0
29	2270A07	Stress Management by Yoga (Audit Course)	0
30	2270A08	Personality Development through Life Management Skills (Audit Course)	0
31	2298301	Reinforcement Learning(PEC-V)	100
32	2298302	Federated Machine Learning(PEC-V)	100
33	2298303	Intrusion Detection Systems(PEC-V)	100
34	22OE981	Knowledge Engineering and Data Science(OEC)	100
35	22 OE982	Cloud Data Management (OEC)	100
36	22 OE983	Soft Computing (OEC)	100
37	2298307	Dissertation Phase – I	0
38	2298308	Co-curricular Activities	100
39	2298401	Dissertation Phase – II	0
<b>Average Percentage Changes in Curriculum (%)</b>			<b>39.5</b>

**Graph of changed incorporated in R22PG Syllabus compared with R18PG Syllabus  
M.Tech I Sem to IV Sem**



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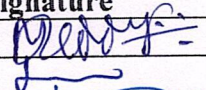
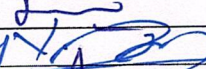

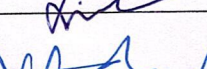
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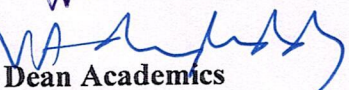
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**Internal Evaluation Committee:**

S.No	Name of the Faculty	Designation	Signature
1	Dr. V.Lokeswara Reddy	Professor & HOD	
2	Dr. M. Sreenivasulu	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Dr. S. Nageswara Rao	Associate Professor	

  
HOD CSE

  
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**PG Programs in Engineering (R22PG)**  
**(Effective from 2022-23)**



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**M.Tech - Artificial Intelligence & Data Science (Computer Science & Engineering)**

**Semester - I**

S. No.	Course codes	Course Name	Category	Hours per week			IM	EM	Credits
				L	T	P			
1.	2298101	Machine Learning	PCC	3	0	0	40	60	3
2.	2298102	Artificial Intelligence	PCC	3	0	0	40	60	3
3.	2298103 2298104 2298105	<b>Program Elective Course – I</b> 1. Big Data Analytics 2. Information retrieval 3. Natural Language Processing	PEC	3	0	0	40	60	3
4.	2298106 2298107 2298108	<b>Program Elective Course - II</b> 1. Data Visualization Techniques 2. Distributed Systems 3. Medical Image Processing	PEC	3	0	0	40	60	3
5.	2298109	AI & ML Lab	PCC	0	0	4	50	50	2
6.	2298110	Advanced Python Programming Lab	PCC	0	0	4	50	50	2
7.	2284103	Research Methodology & IPR	MC	2	0	0	40	60	2
8.	2270AXX	<b>Audit Course – I</b>	AC	2	0	0	40	0	0
<b>Total</b>							<b>340</b>	<b>400</b>	<b>18</b>

**Semester - II**

S. No.	Course codes	Course Name	Category	Hours per week			IM	EM	Credits
				L	T	P			
1.	2298201	Data Science	PCC	3	0	0	40	60	3
2.	2298202	Deep Learning	PCC	3	0	0	40	60	3
3.	2298203 2298204 2298205	<b>Program Elective Course - III</b> 1. Block Chain Technology 2. Exploratory Data Analysis using R 3. Video Analytics	PEC	3	0	0	40	60	3
4.	2298206 2298207 2298208	<b>Program Elective Course – IV</b> 1. Text Mining & Time Series Data Analysis 2. Social Media Analysis 3. Artificial Intelligence in Cyber Security	PEC	3	0	0	40	60	3
5.	2298209	Deep Learning Lab	PCC	0	0	4	50	50	2
6.	2298210	Program Elective Course Lab	PEC	0	0	4	50	50	2
7.	2298211	Technical seminar	PROJ	0	0	4	100	0	2
8.	2270AXX	<b>Audit Course – II</b>	AC	2	0	0	40	0	0
<b>Total</b>							<b>400</b>	<b>420</b>	<b>18</b>

  
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**Professor & HOD CSE**  
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**Semester - III**

S. No	Course codes	Course Name	Category	Hours per			IM	EM	Credits
				L	T	P			
1.	2298301 2298302 2298303	<b>Program Elective Course – V</b> 1. Reinforcement Learning 2. Federated Machine Learning 3. Intrusion Detection Systems	PEC	3	0	0	40	60	3
2.	22OE98X	<b>Open Elective</b>	OEC	3	0	0	40	60	3
3.	2298307	Dissertation Phase – I	PROJ	0	0	20	100	0	10
4.	2298308	Co-curricular Activities							2
		<b>Total</b>					<b>180</b>	<b>120</b>	<b>18</b>

**Semester - IV**

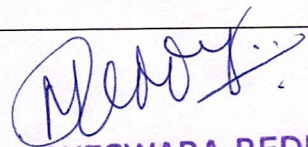
S. No	Course codes	Course Name	Category	Hours per			IM	EM	Credits
				L	T	P			
1.	2298401	Dissertation Phase – II	PROJ	0	0	32	50	50	16
		<b>Total</b>							<b>16</b>

**AUDIT COURSES**

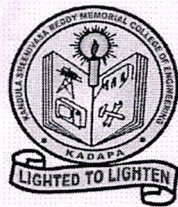
S.No	Subject Code	Subject
<b>AUDIT COURSE - I</b>		
1	2270A01	English for Research Paper Writing
2	2270A02	Disaster Management
3	2270A03	Sanskrit for Technical Knowledge
4	2270A04	Values for Professional Ethics
5	2270A05	Constitution of India
6	2270A06	Pedagogy Studies
7	2270A07	Stress Management by Yoga
8	2270A08	Personality Development through Life Management Skills

**OPEN ELECTIVES**

S.No	Subject Code	Subject
1	22OE981	Knowledge Engineering and Data Science
2	22OE982	Cloud Data Management
3	22OE983	Soft Computing

  
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## Department of Humanities & Sciences

Programme: B. Tech

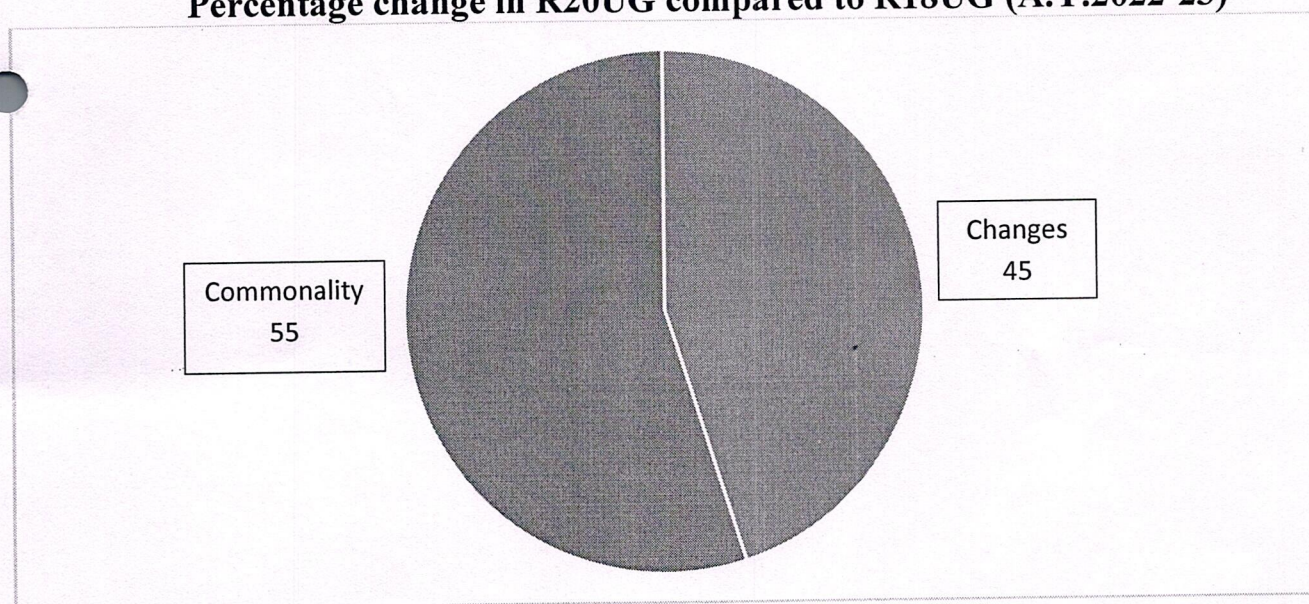
### Syllabus comparison between R20UG and R18UG (AY.2022-23)

S. No	Course/Subject code	Course Title	Department	Percentage of change in R20UG compared to R18UG
Semester: V				
1	Management Organizational Behaviour	20MC510	CE,ECE	20
2	Constitution of India	20MC509	EEE,ME,CSE	100
3	Employability Skills	20OE601	OE	100
4	Advanced Numerical Methods	20OE602	OE	20
5	Engineering Materials	20OE607	OE	20
6	Basics of Nanotechnology	20OE604	OE	20
7	Write it Right	20OE605	OE	20
8	Human Capital Management	20OE606	OE	20
Semester: VI				
9	Human Resource Development	2006601	CE,ECE(OE)	100
10	Digital Marketing	2006602	CE,ECE(OE)	100
11	Project Management	2006603	CE,ECE(OE)	100
12	Mathematical Statistics for Data Science and Data Analytics	20OE603	OE	20



13	Basics of Electrical, Magnetic and Optoelectronic materials	200E608	OE	20
14	Corrosion & Control	200E609	OE	20
15	Professional Communication	200E610	OE	20
16	Basics Financial Management for Engineers	200E611	OE	20
Average % change in curriculum				720/16 = 45

### Percentage change in R20UG compared to R18UG (A.Y.2022-23)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1	Dr. G.Radha	Associate Professor	<i>G. Radha</i>
2.	Sri. N. Bhaskara Reddy	Assistant Professor	<i>Bhaskara Reddy</i>
3.	Dr. G Ashok Reddy	Associate Professor	<i>G. Ashok Reddy</i>
4.	Dr.K.Venkata Ramana	Assistant Professor	<i>K. Venkata Ramana</i>
5.	Sri. Y. Ramana Reddy	Assistant Professor	<i>Y. Ramana Reddy</i>

*Dr. I. SREEVANT* M.Sc., Ph.D  
**HOD**  
 Dept.of Humanities & sciences  
 K.S.R.M. College of Engineering  
 KADAPA Dist.

*W. S. S. S. S.*  
**Dean**  
**(Academics)**



# **K.S.R.M COLLEGE OF ENGINEERING**

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## **INDEX**

### **SYLLABUS COMPARISION**

**A.Y 2021-22**

<b>S.NO</b>	<b>PROGRAMME NAME</b>
<b>1</b>	<b>Department of Civil Engineering</b>
<b>2</b>	<b>Department of Electrical &amp; Electronics Engineering</b>
<b>3</b>	<b>Department of Mechanical Engineering</b>
<b>4</b>	<b>Department of Electronics and Communication Engineering</b>
<b>5</b>	<b>Department of Computer Science Engineering</b>
<b>6</b>	<b>Department of Humanities and Sciences</b>





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Department of Civil Engineering

## Syllabus comparison between R20UG and R18UG

Programme: B. Tech.

Branch: Civil Engineering

Semester: III and IV

Sl. No.	Course code	Course Title	Percentage change in R20 compared to R18
1	2001302	Geology and Building materials	50
2	2001303	Advanced Strength of materials	50
3	2001304	Fluid Mechanics	45
4	2001305	Geomatics	20
5	2001306	Fluid Mechanics Laboratory	0
6	2001307	Geomatics Lab	0
7	20013S1	Civil Engineering Workshop (Skill oriented)	100
8	2001402	Hydraulics & Hydraulic Machinery	20
9	2001403	Soil Mechanics	0
10	2001404	Structural Analysis	50
11	2001405	Transportation Engineering	0
12	2001406	Building Planning and Drawing (AutoCAD)	100
13	2001407	Soil Mechanics Laboratory	0
14	2001408	Transportation Engineering Laboratory	0
15	20014S2	Advanced Civil Engineering Workshop (Skill oriented-2)	0
Average Percentage change in Curriculum			29





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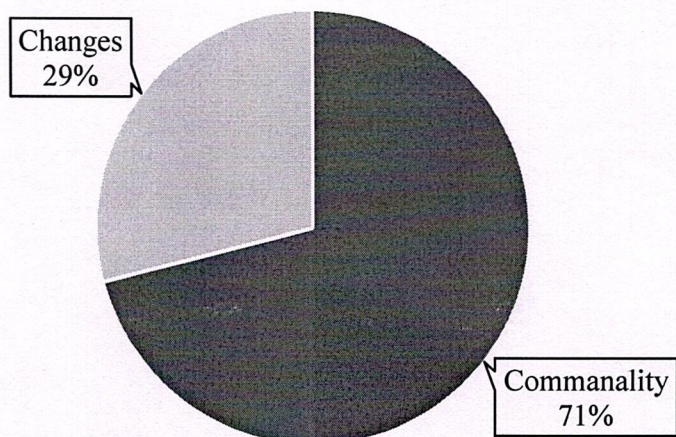
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## % change in R20UG compared to R18UG



### Internal Evaluation Committee:

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1.	Dr. N. Amaranatha Reddy	Associate Professor	
2.	Dr. G. Sreenivasa Reddy	Professor	
3.	Dr. V. Giridhar	Professor	
4.	Dr. T. Kiran Kumar	Professor	

HOD

Head

Department of Civil Engineering  
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Department of Civil Engineering

## Syllabus comparison between R18UG and R15UG

Programme: B. Tech.

Branch: Civil Engineering

Semester: VII and VIII

Sl. No.	Course code	Course Title	Percentage change in R18 compared to R15
1	1801701	Engineering Economics, Estimation & Costing	0
2	1801702	Design of Reinforced Concrete Structures – 2	60
3	1801703	Design of Steel Structures	0
4	1801704	Water Resources Engineering – 2	0
5	1801705	Sanitary Engineering & Solid Waste Management	0
6	1801706	Advanced Structural Analysis by Matrix Methods	100
7	1801707	Advanced Foundation Engineering	0
8	1801708	Soil Dynamics & Machine Foundation	100
9	1801709	Intelligent Transportation Systems	100
10	1801710	Construction Project Planning and Systems	20
11	1801711	Environmental Impact Assessment	0
12	1801712	Integrated Watershed Management	100
13	18OE103	Building Technology	70
14	18OE104	Estimating & Costing	0
15	18OE105	Water Supply Engineering	0
16	18OE106	Construction Practice and Management	20
17	1801802	Repairs & Rehabilitation of Structures	100
18	1801803	Bridge Engineering	0





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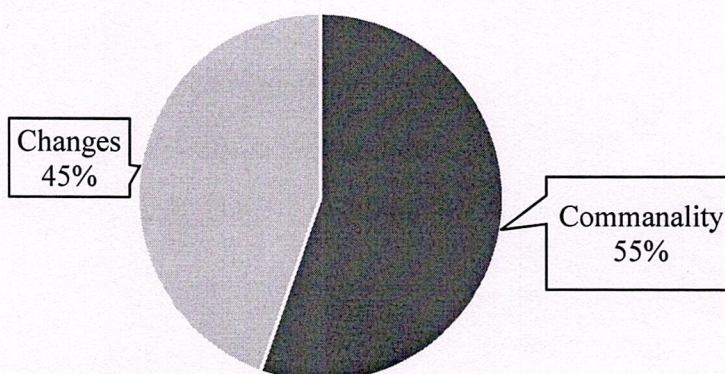
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19	1801804	Finite Element Method	0
20	1801805	Environmental Geotechnology	100
21	1801806	Urban Transportation Planning	100
22	1801807	Design and Drawing of Irrigation Structures	0
23	18OE107	Disaster Preparedness	100
24	18OE108	Rehabilitation of Structures	100
Average Percentage change in Curriculum			45

% change in R18UG compared to R15UG



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. N. Amaranatha Reddy	Associate Professor	
2.	Dr. G. Sreenivasa Reddy	Professor	
3.	Dr. V. Giridhar	Professor	
4.	Dr. T. Kiran Kumar	Professor	

HOD  
Head

Dean Academics

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## Department of Electrical and Electronics Engineering

### Syllabus comparison between R20UG and R18UG (AY 2021-22)

Programme: B. Tech.

Semester: III and IV

Sl. No.	Course code	Course Title	Percentage change in R20UG compared to R18UG
<b>III Semester</b>			
1	2002301	Switching Theory & Logic Design	10
2	2002302	Electromagnetic Field Theory	15
3	2002303	Electrical Circuit Analysis - II	10
4	2002304	Electrical Measurements & Measuring Instruments	15
5	2002305	DC Machines & Transformers	15
6	2002306	Electrical Circuit Analysis – II Lab	15
7	2002307	Electrical Measurements & Measuring Instruments Lab	15
8	2002308	DC Machines & Transformers Lab	10
9	2002309	Fundamentals of MATLAB Programming (Skill Oriented Course)	100
10	20MC310	Human Values & Professional Ethics	15
<b>IV Semester</b>			
11	2021401	Special Functions & Complex Analysis	05
12	2025402	Fundamentals of Management for Engineers	15
13	2002403	Induction Motors & Synchronous Machines	05
14	2002404	Linear Control Systems	10
15	2002405	Power Systems - I	10
16	2002406	Induction Motors & Synchronous Machines Lab	10
17	2002407	Control Systems Lab	15
18	2005408	Python Programming Lab	15
19	2002409	2-D Graphics & Symbolic Processing using MATLAB (Skill Oriented Course)	100
<b>Average Percentage change in Curriculum</b>			<b>21.31</b>





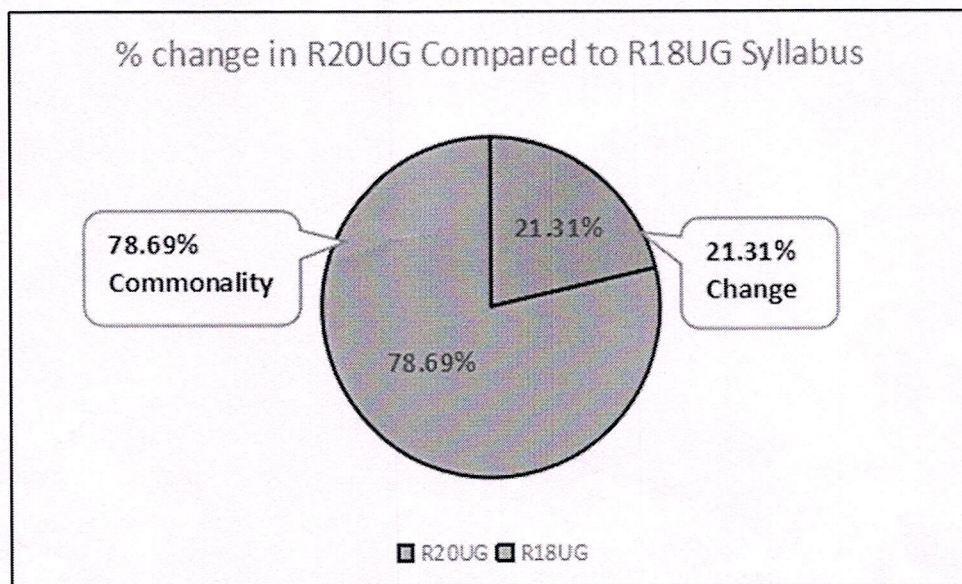
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## Internal Evaluation Committee:

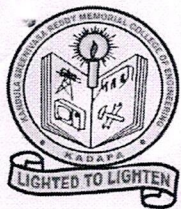
S.No.	Name of the Faculty	Designation	Signature
1.	Dr. K. Amaresh	Professor & HoD	
2.	Dr. C. Kumar Reddy	Associate Professor	
3.	Mr. K. Rama Mohan Reddy	Associate Professor	
4.	Mr. P. Durga Prasad	Assistant Professor	

HOD

HEAD  
Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Cuddapah - 516 003

Dean Academics





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## Department of Electrical and Electronics Engineering

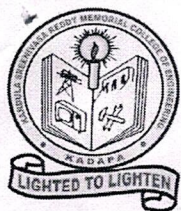
### Syllabus comparison between R18UG and R15UG (AY 2021-22)

Programme: B. Tech.

Semester: VII and VIII

Sl. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
<b>VII Semester</b>			
1	1825701	Project Management	100
2	1802702	Utilization of Electrical Power	05
3	1802703	Flexible AC Transmission System	05
4	1802704	Power Quality	05
5	1802705	Digital Control Systems	100
6	1802706	Digital Signal Processing	05
7	1802707	Smart Grid	100
8	18OE203	Energy Conversion Systems (OEC- II)	100
9	18OE204	Internet of Things (OEC- II)	100
10	18OE205	Intelligent Control Techniques (OEC- III)	100
11	18OE206	Electrical System Estimation & Costing (OEC- III)	100
12	1802708	Labview Programming	100
13	1802709	Power Systems – II Lab	75
14	1824710	Effective Technical Communication Skills Lab	100
15	1802711	Project Stage – I	100
16	18997M3	Universal Human Values	100
<b>VIII Semester</b>			
17	1802801	Electrical Distribution Systems	06
18	1802802	Power System Reliability	05
19	1802803	Industrial Automation & Control	100
20	1802804	SCADA & its Application	100
21	1802805	Distributed Generation & Micro Grid	100
22	18OE207	Basics of Power Electronics (OEC- IV)	100
23	18OE208	System Reliability Concepts (OEC- IV)	100
24	1802806	Technical Seminar	00
25	1802807	Project Stage - II	00
<b>Average Percentage change in Curriculum</b>			<b>68.24</b>





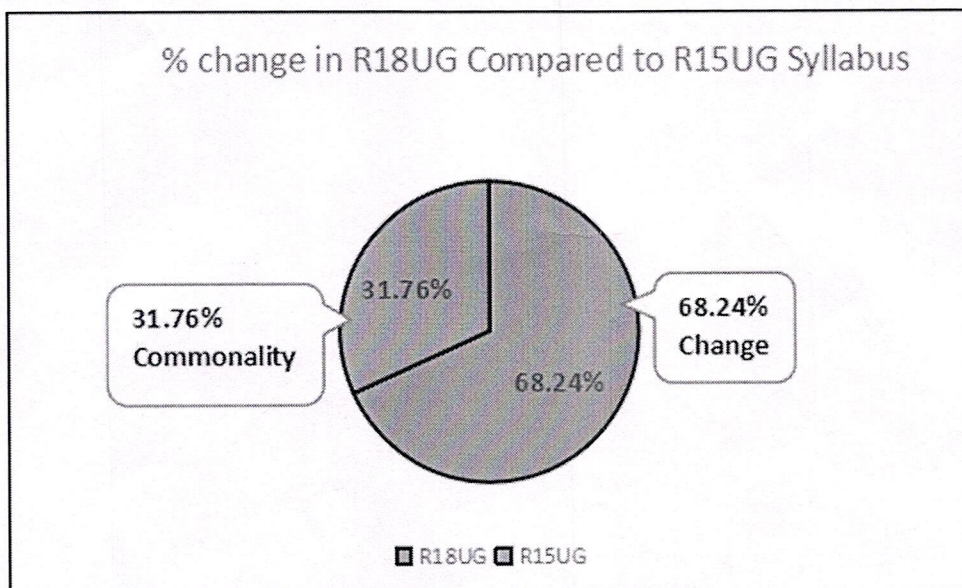
# K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India- 516 005

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## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. K. Amaresh	Professor & HoD	
2.	Mr. K. Kalyan Kumar	Assistant Professor	
3.	Mrs. Saleha Tabassum	Assistant Professor	
4.	Mr. T. Kishore Kumar	Assistant Professor	

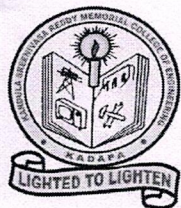
HOD

HEAD

Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Cuddapah - 516 003

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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R20UG and R18UG (AY-2021-22)

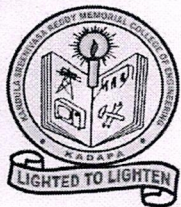
Programme: B. Tech.

Branch: Mechanical Engineering

Semester: III and IV

Sl. No.	Course code	Course Title	% change in R20UG compared to R18UG
1	2003301	Fundamentals Of Statistics And Dynamics	20
2	2003302	Fluid Mechanics & Hydraulic Machinery	30
3	2003303	Manufacturing Process	20
4	2003304	Engineering Thermodynamics	20
5	2003305	Mechanics Of Materials	20
6	2003306	Fluid Mechanics & Hydraulic Machinery Lab	10
7	2003307	Manufacturing Technology Lab	10
8	2003308	Mechanics Of Materials Lab	10
9	2003309	CATIA (Skill Oriented Course)	100
10	2003402	Applied Thermodynamics	25
11	2003403	Kinematics Of Machinery	20
12	2003404	Machine Tools	20
13	2003406	Applied Thermodynamics Lab	10
14	2003407	Machine Tools Lab	10
15	2003408	Computer Aided Machine Drawing	5
16	2003409	CNC Programming And Simulation	100
		<b>Average Percentage change in Curriculum</b>	<b>26.87</b>





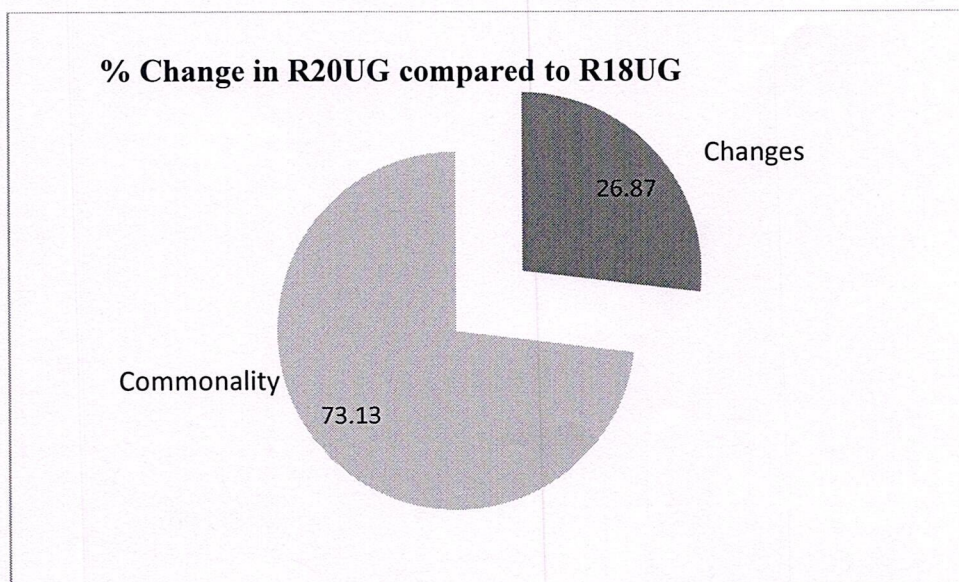
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## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Prof. D. Ravikanth	Professor	
2.	Sri K. Suresh Kumar	Associate Professor	
3.	Sri R. Rama Krishna Reddy	Associate Professor	
4.	Sri C. Nagaraja	Assistant Professor	

HoD

Professor & head  
Department of Mechanical Engineering  
K.S.R.M. College of Engineering  
KADAPA - 516 003.

Dean  
(Academics)





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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R18UG and R15UG (AY-2021-22)

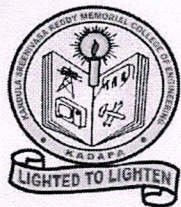
Programme: B. Tech.

Branch: Mechanical Engineering

Semester: VII and VIII

Sl. No.	Course code	Course Title	% change in R18UG compared to R15UG
1	1803701	CAD/CAM	10
2	1803702	Finite Element Methods (Fem)	20
3	1803703	Quality Engineering Management	100
4	1803704	Production And Operations Management	5
5	1803705	Rapid Prototyping	5
6	1803706	Mechatronics	70
7	1803707	Flexible Manufacturing Systems	100
8	1803708	Computer Graphics	100
9	1803709	Industrial Safety	100
10	18OE303	Industrial Safety & Management	100
11	18OE304	Smart Materials	100
12	18OE305	Quantitative Analysis For Business Decisions	100
13	18OE306	Entrepreneurship	40
14	1803714	Metrology Lab	10
15	1803715	Instrumentation And Control Systems Lab	10
16	1803716	Minor Project	100
17	1803717	Introduction To ANSYS	100
18	1803801	Refrigeration And Air Conditioning	30
19	1803802	Modern Manufacturing Methods	100
20	1803803	Composite And Nano Materials	100
21	1803804	Introduction To Expert Systems	100
22	1803805	Computer Aided Process Planning	100
23	1803806	Reliability In Engineering	100
24	1803807	Total Quality Management	100
25	1803808	Introduction To Ic Engines	30
26	1803813	Major Project	0
		<b>Average Percentage change in Curriculum</b>	<b>66.54</b>





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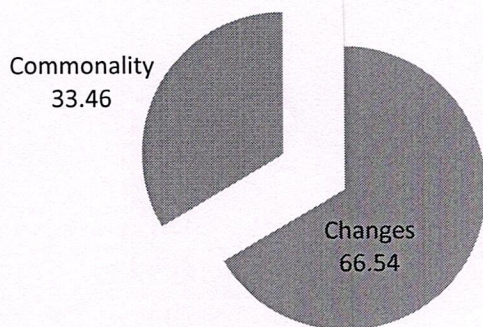
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## % change in R18UG compared to R15UG



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Prof. D. Ravikanth	Professor	
2.	Sri K. Suresh Kumar	Associate Professor	
3.	Sri R. Rama Krishna Reddy	Associate Professor	
4.	Sri C. Nagaraja	Assistant Professor	

HoD

Professor & Head  
Department of Mechanical Engineering  
K.S.R.M. College of Engineering  
KADAPA - 516 003.

Dean  
(Academics)





# K.S.R.M. COLLEGE OF ENGINEERING

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Department of Electronics and Communication Engineering

## Syllabus comparison between R20UG and R18UG

Programme: B.Tech

Branch: Electronics and Communication Engineering

Semester : III and IV

S. No.	Course code	Course Title	Percentage change in R20UG compared to R18UG
1	2004301	Signals and Systems	10
2	2004302	Digital System Design	5
3	2004303	Analog Circuits	20
4	2004304	Network Theory	20
5	2004305	Simulation Lab	10
6	2004306	Digital System Design Lab	80
7	2004307	Analog Circuits Lab	50
8	20SC308	Python Programming (Skilled Course - I)	10
9	2021403	Probability Theory & Stochastic Processes	10
10	2004403	Microprocessors and Microcontrollers	20
11	2004404	Electro Magnetic Waves and Transmission Lines	0
12	2004405	Linear and Digital IC Applications	40
13	2004406	Linear and Digital IC Applications Lab	40
14	2004407	Microprocessors and Microcontrollers Lab	10
15	2004408	LabView Programming Lab	0
16	20SC409	PCB Design (Skilled Course -II)	100
Average Percentage change in Curriculum			27%





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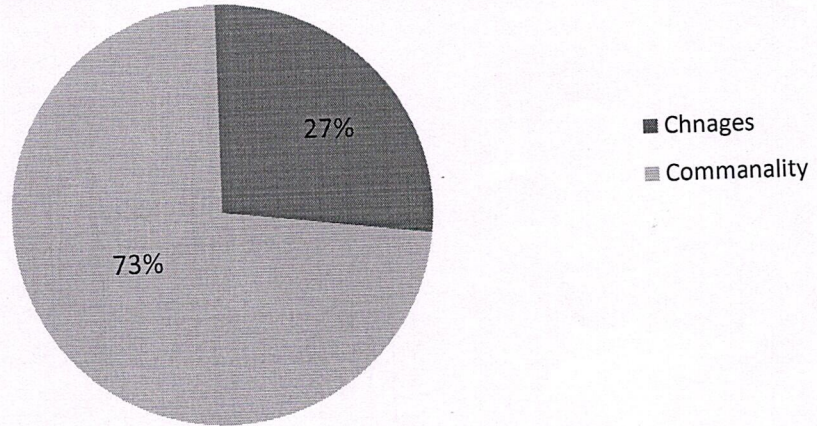
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Percentage change in Regulation R20UG compared to R18UG



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
2.	Dr. M. V. Narayana	Professor	
3.	Sri R. V. Sreehari	Assoc. Professor	
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	

HoD

Professor & H.O.D.  
Department of E.C.E.  
K.S.R.M. College of Engineering  
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Department of Electronics and Communication Engineering

## Syllabus comparison between R18UG and R15UG

Programme: B.Tech

Branch: Electronics and Communication Engineering

Semester : VII and VIII

S. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
1	1804701	Internet Of Things	100
2	1804702	Electronic Measurements & Instrumentation	5
3	1804703	Information Theory & Coding	100
4	1804704	Real Time Operating Systems	60
5	1804705	Scientific Computing	100
6	1804706	CMOS Design	100
7	1804707	Electromagnetic Interference & Compatibility	100
8	1804708	Radar and Satellite Communication	50
9	1804709	Computer System Architecture	60
10	1804710	Digital Image & Video processing	20
11	1804711	Digital IC Design	80
12	1804712	Cognitive Radio	100
13	1804713	IOT Lab	100
14	1824801	Wireless Communication	80
15	1804802	SoC Architecture	100
16	1804803	Speech Processing	0
17	1804804	Low Power VLSI	60
18	1804805	RF System Design	100
Average Percentage change in Curriculum			73%





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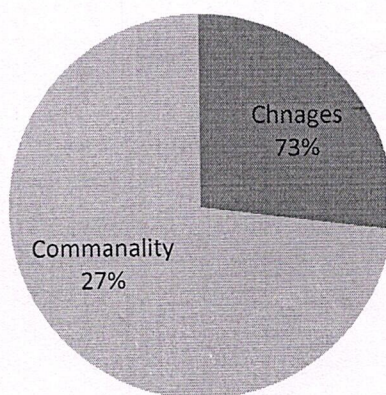
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## Syllabus comparison between R18UG and R15UG



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
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3.	Sri R. V. Sreehari	Assoc. Professor	
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	

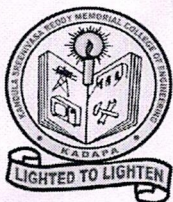
HoD

Professor & H.O.D.  
Department of E.C.E.

K.S.R.M. College of Engineering  
KADAPA - 516 003

Dean Academics





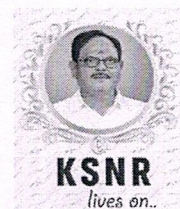
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## Syllabus Comparison between R20UG and R18UG, AY 2021-22

Programme: B.Tech

Branch: Computer Science& Engineering

Semester: III and IV

S.no	Course Code	Course Title	Percentage of change in R20UG compared to R18UG
1	2005302	Advanced Data Structures	30
2	2005303	Formal Languages & Automata Theory	0
3	2005304	Object Oriented Programming through JAVA	0
4	2005305	Data Base Management Systems	30
5	2005306	Advanced Data Structures Lab	30
6	2005307	JAVA Lab	20
7	2005308	Data Base Management Systems Lab	50
8	2005309	Skill Oriented Course Exploring Data Analysis with R	100
9	2005402	Computer Organization	5
10	2005403	Principles of Operating Systems	3
11	2005404	Digital Logic Circuits & Design	5
12	2005407	Principles of Operating Systems Lab	20
13	2005408	Digital Logic Design Lab	100
14	2005409	Skill Oriented Course Advanced Python Programming	100
Average Percentage Changes in Curriculum (%)			35.21



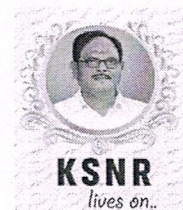
# K.S.R.M. COLLEGE OF ENGINEERING

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Kadapa, Andhra Pradesh, India- 516 003

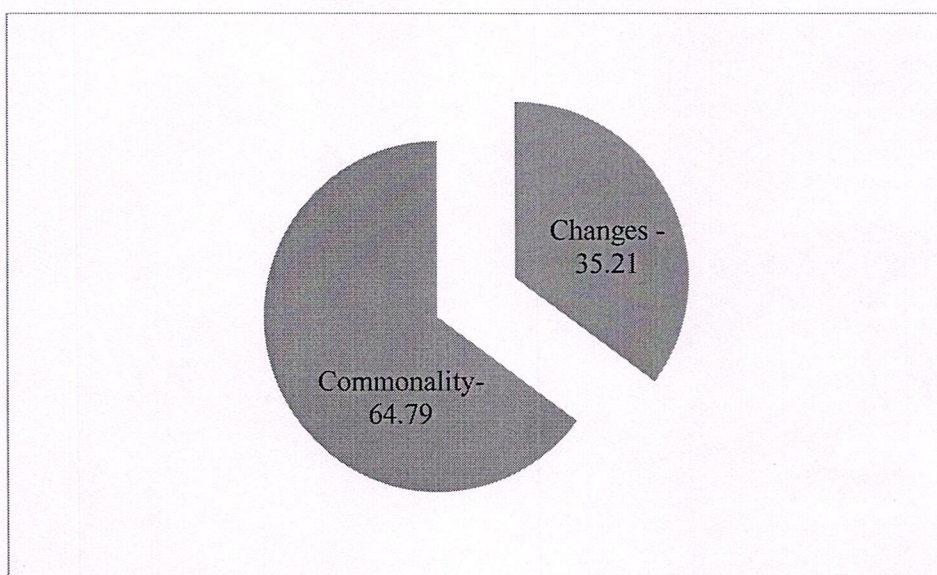
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## Percentage change in R20UG Syllabus Compared to R18UG Syllabus

### B.Tech III Semester and IV Semester



#### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.V.Lokeswara Reddy	Professor & HOD	
2	Dr.M.Sreenivasulu	Professor	
3	Dr. G. Nagendra Babu	Associate Professor	
4	B.Manorama Devi	Assistant Professor	

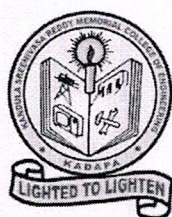
HoD/CSE

Dean Academics

Dr. V. LOKESWARA REDDY  
M.Tech., Ph.D.,  
Professor & HOD CSE  
K.S.R.M. College of Engineering (Autonomous)  
KADAPA - 516 005.



**UG Programs in Engineering (R20UG)  
Curriculum and Syllabus for  
I - VIII Sem B.Tech  
Department of Computer Science and Engineering**



**Kandula Srinivasa Reddy Memorial College of Engineering (Autonomous)  
Kadapa 516003 AP  
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NAAC) (An ISO 9001-2008 Certified Institution)**



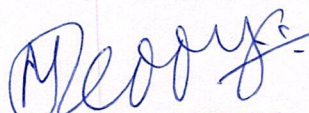
**Semester-0(Theory-8, Lab-7) Induction Program**

S.No	Course Name	Category	L	T	P	C
1	Physical Activities-Sports, Yoga & Meditation, plantation	MC	0	0	6	0
2	Career Counseling	MC	2	0	2	0
3	Orientation to all branches-career options, tools etc.	ESC	3	0	0	0
4	Orientation on admitted branch-corresponding labs, tools & platforms	EC	2	0	3	0
5	Proficiency Modules & Productivity Tools	ES	2	1	2	0
6	Assessment on basic aptitude and mathematical skills	MC	2	0	3	0
7	Remedial Training in foundation courses	MC	2	1	2	0
8	Human values & Professional ethics	MC	3	0	0	0
9	Communication skills-focus on listening, speaking, reading, writing skills	BS	2	1	2	0
10	Concepts of programming	ES	2	0	2	0

L-Lecture, T-Tutorial, P-Practical

**I Semester (Theory- 5, Labs-04)**

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021101	Linear Algebra and Calculus	BSC	3	0	0	40	60	3
2	2023102	Chemistry	BSC	3	0	0	40	60	3
3	2005103	C-Programming & Data Structure	ESC	3	0	0	40	60	3
4	2014104	Basic Electrical & Electronics Engineering	ESC	3	0	0	40	60	3
5	20EW105	Engineering Workshop	ESC	0	0	3	40	60	1.5
6	2005106	IT Workshop	ESC	0	0	3	40	60	1.5
7	2023107	Chemistry Lab	BSC	0	0	3	40	60	1.5
8	2005108	C-Programming & Data Structures Lab	ESC	0	0	3	40	60	1.5
9	2014109	Basic Electrical & Electronics Engineering Lab	ESC	0	0	3	40	60	1.5
<b>Total</b>				<b>12</b>	<b>00</b>	<b>15</b>	<b>360</b>	<b>540</b>	<b>19.5</b>

  
**Dr. V. LOKESWARA REDDY**  
 M.Tech., Ph.D.,  
 Professor & HOD CSE  
 K.S.R.M. College of Engineering (Autonomous)  
 KADAPA - 516 005.




## II Semester (Theory-05, Lab-04)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021201	Differential Equations & Vector Calculus	BSC	3	0	0	40	60	3
2	20AP202	Applied Physics	BSC	3	0	0	40	60	3
3	2024203	Communicative English	HS MC	3	0	0	40	60	3
4	2005204	Python Programming	ESC	3	0	0	40	60	3
5	2003205	Engineering Drawing	ESC	1	0	2	40	60	2
6	2003206	Engineering Drawing Lab	ESC	0	0	2	40	60	1
7	20AP207	Applied Physics Lab	BSC	0	0	3	40	60	1.5
8	2024208	Communicative English Lab	HS MC	0	0	3	40	60	1.5
9	2005209	Python Programming Lab	ESC	0	0	3	40	60	1.5
10	20MC210	Environmental Science	MC	3	0	0	40	00	0.0
<b>Total</b>				<b>16</b>	<b>00</b>	<b>13</b>	<b>390</b>	<b>540</b>	<b>19.5</b>

## III Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2024301	Business Economics and Accounting for Engineers	HSM C	3	0	0	40	60	3
2	2005302	Advanced Data Structures	PCC	3	0	0	40	60	3
3	2005303	Formal Languages & Automata Theory	PCC	3	0	0	40	60	3
4	2005304	Object Oriented Programming through JAVA	PCC	3	0	0	40	60	3
5	2005305	Data Base Management Systems	PCC	3	0	0	40	60	3
6	2005306	Advanced Data Structures Lab	PCC	0	0	3	40	60	1.5
7	2005307	JAVA Lab	PCC	0	0	3	40	60	1.5
8	2005308	Data Base Management Systems Lab	PCC	0	0	3	40	60	1.5
9	2005309	Skill Oriented Course Exploring Data Analysis with R/ NASSCOM Courses	SC	0	0	4	40	60	2.0
<b>Total</b>				<b>15</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>540</b>	<b>21.5</b>

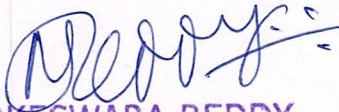
  
**Dr. V. LOKESWARA REDDY**  
M.Tech., Ph.D.,

**Professor & HOD CSE**  
**K.S.R.M. College of Engineering (Autonomous)**  
**KADAPA - 516 005.**



IV Semester (Theory-05, Lab-03)

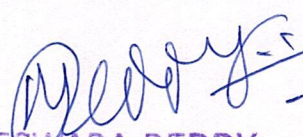
S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005401	Principles of Operating Systems	PCC	3	0	0	40	60	3
2	2005402	Computer Organization	PCC	3	0	0	40	60	3
3	2004403	Microprocessors & Microcontrollers	ESC	3	0	0	40	60	3
4	2005404	Digital Logic Circuits & Design	PCC	3	0	0	40	60	3
5	2021405	Probability Theory & Statistical Methods	BSC	3	0	0	40	60	3
6	2014406	Microprocessors & Microcontrollers Lab	ESC	0	0	3	40	60	1.5
7	2005407	Principles of Operating Systems Lab	PCC	0	0	3	40	60	1.5
8	2005408	Digital Logic Design Lab	PCC	0	0	3	40	60	1.5
9	2005409	Skill Oriented Course Advanced Python Programming/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	2024410	Universal Human Values	HSMC	3	0	0	40	60	3.0
<b>Total</b>				<b>18</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>600</b>	<b>24.5</b>

  
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 KADAPA - 516 005.



V Semester (Theory-05, Lab-02)

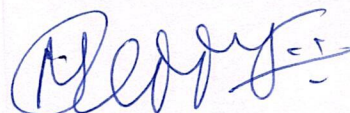
S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005501	Software Engineering	PCC	3	0	0	40	60	3
2	2005502	Design and Analysis of Algorithms	PCC	3	0	0	40	60	3
3	2005503	Computer Networks	PCC	3	0	0	40	60	3
		Open Elective Course-I(OEC-I)							
4	200E501	Data Structures	OEC	3	0	0	40	60	3
	200E502	Database Management Systems	OEC	3	0	0	40	60	3
		Professional Elective Course -I (PEC-I)							
5	2005504	Web Technologies	PEC	3	0	0	40	60	3
	2005505	Multimedia Systems	PEC	3	0	0	40	60	3
	2005506	Distributed Systems	PEC	3	0	0	40	60	3
6	2005507	DAA Lab	PCC	0	0	3	40	60	1.5
7	2005508	Professional Elective Course -I Lab	PCC	0	0	3	40	60	1.5
8	20245SC	Soft Skill Oriented Course Advanced English & Communication Lab/Professional Communication Lab	SC	0	0	4	40	60	2.0
9	2005510	Community Service Project	PROJ	0	0	0	100		1.5
10	20MC509	Constitution of India	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>10</b>	<b>420</b>	<b>480</b>	<b>21.5</b>

  
**Dr. V. LOKESWARA REDDY**  
 M.Tech., Ph.D.,  
 Professor & HOD CSE  
 K.S.R.M. College of Engineering (Autonomous)  
 KADAPA - 516 005.



VI Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2005601	Internet of Things	PCC	3	0	0	40	60	3
2	2005602	Data Mining	PCC	3	0	0	40	60	3
3	2005603	Cryptography & Network Security	PCC	3	0	0	40	60	3
		Open Elective Course -II(OEC-II)							
4	20OE503	Java Programming	OEC	3	0	0	40	60	3
	20OE504	Web Designing	OEC	3	0	0	40	60	3
		Professional Elective Course – II (PEC-II)							
5	2005604	Artificial Intelligence	PEC	3	0	0	40	60	3
	2005605	Software Testing	PEC	3	0	0	40	60	3
	2005606	Adhoc & Sensor Networks	PEC	3	0	0	40	60	3
6	2005607	IOT Lab	PCC	0	0	3	40	60	1.5
7	2005608	Data Mining Lab	PCC	0	0	3	40	60	1.5
8	2005609	Network Security Lab	PCC	0	0	3	40	60	1.5
9	2005610	Skill Oriented Course Mobile Application Development/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	20MC612	Management Organizational Behavior	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>13</b>	<b>440</b>	<b>540</b>	<b>21.5</b>




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VII Semester (Theory-06)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
		Professional Elective Course-III (PEC-III)							
1	2005701	Compiler Design	PEC	3	0	0	40	60	3
	2005702	Computer Graphics	PEC	3	0	0	40	60	3
	2005703	Cyber Security	PEC	3	0	0	40	60	3
		Professional Elective Course-IV (PEC-IV)							
2	2005704	Machine Learning	PEC	3	0	0	40	60	3
	2005705	Object Oriented Analysis & Design	PEC	3	0	0	40	60	3
	2005706	Natural Language Processing	PEC	3	0	0	40	60	3
		Professional Elective Course-V (PEC-V)							
3	2005707	Cloud Computing	PEC	3	0	0	40	60	3
	2005708	Deep Learning	PEC	3	0	0	40	60	3
	2005709	Computer Vision	PEC	3	0	0	40	60	3
		Open Elective Course-III(OEC-III)							
4	20OE505	Operating System	OEC	3	0	0	40	60	3
	20OE506	R Programming	OEC	3	0	0	40	60	3
		Open Elective Course-IV(OEC-IV)							
5	20OE508	Python Programming	OEC	3	0	0	40	60	3
	20OE509	Cloud Computing	OEC	3	0	0	40	60	3
		Humanities & Social Science Elective							
6	2006701	Human Resource Development	HSM C	3	0	0	40	60	3
	2006702	Digital Marketing	HSM C	3	0	0	40	60	3
	2006703	Project Management	HSM C	3	0	0	40	60	3
7	2005710	Skill Oriented Course Big Data Technologies/ NASSCOM Courses	SC	0	0	4	40	60	2
8	2005711	Internship	INT	0	0	0	100	0	3
<b>Total</b>				<b>18</b>	<b>00</b>	<b>4</b>	<b>380</b>	<b>420</b>	<b>23</b>

  
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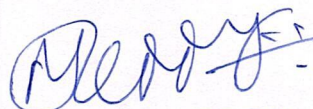


### VIII Semester

S.No	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005801	Major Project/ Internship (6Months)	PROJ	0	0	24	40	60	12
<b>Total</b>									<b>12</b>

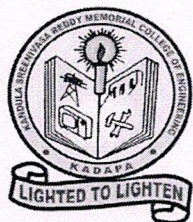
### Structure of the Undergraduate Engineering Program:

S.No.	Category	Code	Credits	APSCHE Suggested Credits
1	Humanities & Social Sciences including Management Sciences	HSMC	10.5	10
2	Basic Science Courses	BSC	18	21
3	Engineering Science Courses	ESC	24	24
4	Professional Core Courses	PCC	54	51
5	Open Elective Courses	OEC	12	12
6	Professional Elective Courses	PEC	15	15
7	Internship & Project Work	PROJ	16.5	17
8	Mandatory Courses	MC	03	Non-Credit
9	Skill Oriented Courses	SC	10	10
	<b>Total Credits</b>		<b>163</b>	<b>160</b>



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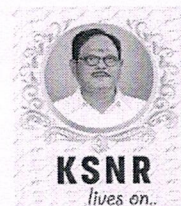
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## Syllabus Comparison between R18UG and R15UG, AY 2021-2022

Programme: B.Tech

Branch: Computer Science & Engineering

Semester: VII and VIII

S.no	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1	1805701	Machine Learning	100
2	1805702	Big Data Technologies	10
3	1805703	Computer Graphics(PE-3/Moocs)	0
4	1805704	Design Patterns (PE-3/Moocs)	100
5	1805705	Cloud Computing (PE-3/Moocs)	7
6	18OE503	Python Programming(OE-2)	100
7	18OE504	Computer Networks (OE-2)	100
8	18OE505	Web Technologies (OE-3)	100
9	18OE506	Operating Systems (OE-3)	100
10	1805710	Big Data Technologies Lab	100
11	1805711	Machine Learning Lab	100
12	1805712	Technical Seminar	0
13	1805713	Project – I	100
14	1805801	Cyber Security (PE-4)	100
15	1805802	Object Oriented Analysis & Design (PE-4)	0
16	1805803	Deep Learning (PE-4)	100
17	18OE507	Software Engineering (OE-4/Moocs)	100
18	18OE508	Cloud Computing (OE-4/Moocs)	100
19	1805806	Project – II	0
Average Percentage Changes in Curriculum (%)			69.31





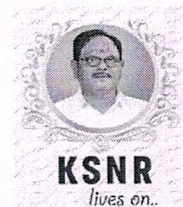
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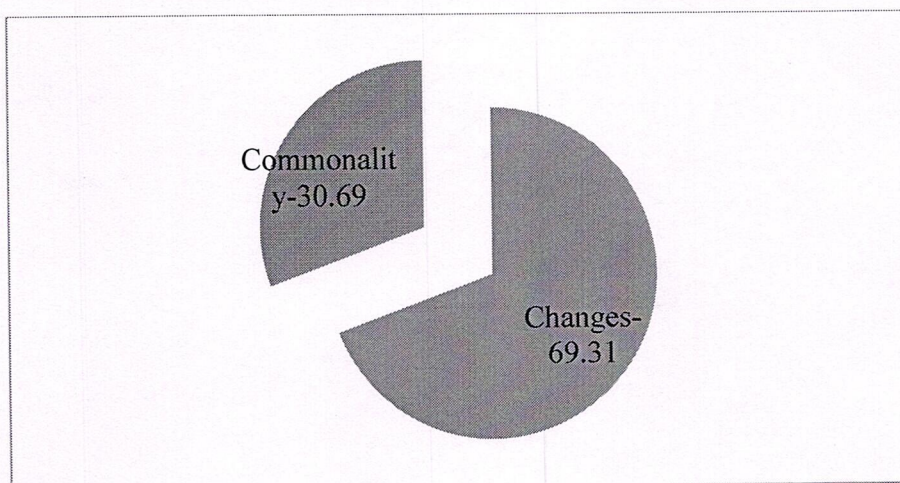
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## Percentage change in R18UG Syllabus Compared to R15UG Syllabus

### B.Tech VII Semester and VIII Semester



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.V.Lokeswara Reddy	Professor & HOD	
2	Dr.M.Sreenivasulu	Professor	
3	Dr. G. Nagendra Babu	Associate Professor	
4	B.Manorama Devi	Assistant Professor	

HoD/CSE

**Dr. V. LOKESWARA REDDY**

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KADAPA - 516 005.

Dean Academics



**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**

**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Tech CSE (I Sem - VIII Sem) (R18 Regulations)**

**(Effective from 2018-19 for Regular students and from 2019-20 for  
Later Entry students)**



**KANDULA SREENIVASA REDDY MEMORIAL COLLEGE OF  
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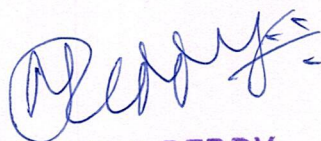
## COMPUTER SCIENCE AND ENGINEERING

### I Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – I	3	1	0	30	70	4
1822104	BSC	Engineering Physics	3	1	0	30	70	4
1802103	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803107	ESC	Engineering Graphics & Design	1	0	4	50	50	3
1822108	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802109	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803110	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
TOTAL			11	3	13	290	410	20.5

### II Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – II	3	1	0	30	70	4
1823202	BSC	Engineering Chemistry	3	1	0	30	70	4
1824203	HSMC	English	2	0	0	30	70	2
1805204	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823207	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805208	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824209	HSMC	English Lab	0	0	2	50	50	1
TOTAL			11	2	9	270	430	17.5



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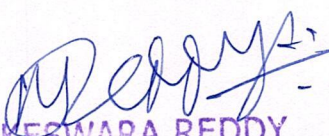


### III Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
18993M1	MC	Environmental Science (Mandatory Course-1)	2	0	0	30	--	0
1804302	PN	Basics of Electronics Engineering	3	0	0	30	70	3
1805303	PCC	Data Structures	3	0	0	30	70	3
1805304	PCC	Discrete Mathematics	3	0	0	30	70	3
1805305	PCC	Digital Logic Design	3	0	0	30	70	3
1805306	PCC	Python Programming	3	0	0	30	70	3
1825307	HSMC	Managerial Economics and Financial Accounting	3	0	0	30	70	3
1814311	PN	Basics of Electronics Engineering Lab	0	0	2	50	50	1
1805309	PCC	Data Structures Lab	0	0	3	50	50	1.5
1805310	PCC	Python Programming Lab	0	0	3	50	50	1.5
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>8</b>	<b>360</b>	<b>570</b>	<b>22</b>

### IV SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1823401	BSC	Biology for Engineers	2	0	0	30	70	2
1821402	BSC	Probability & Statistics	3	0	0	30	70	3
1805403	PCC	Computer Organization	3	0	0	30	70	3
1805404	PCC	Operating Systems	3	0	0	30	70	3
1805405	PCC	Design and Analysis of Algorithms	3	0	0	30	70	3
1805406	PCC	Java Programming	3	0	0	30	70	3
1805407	PCC	Formal Languages and Automata Theory	3	0	0	30	70	3
1805408	PCC	Java Programming lab	0	0	2	50	50	1
1805410	PCC	Operating Systems Lab	0	0	2	50	50	1
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>4</b>	<b>310</b>	<b>590</b>	<b>22</b>

  
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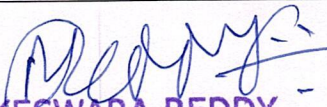


### V SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805501	PCC	Web Technologies	2	0	0	30	70	2
1805502	PCC	Data Base Management Systems	3	0	0	30	70	3
1805503	PCC	Computer Networks	3	0	0	30	70	3
1805504	PCC	Software Engineering	3	0	0	30	70	3
1805505 1805506 1805507	PEC	<b>Professional Elective-1</b> 1. Human Computer Interaction 2. Multimedia Systems 3. Distributed Systems	3	0	0	30	70	3
1805508	PCC	Compiler Design	3	0	0	30	70	3
1825509	PCC	Constitution of India	2	-	-	30	--	0
1805510	PCC	Databases Lab	0	0	2	50	50	1
1805511	PCC	Web Technologies Lab	0	0	2	50	50	1
1824512	HSC	Advanced English and Communications Skills lab	0	0	2	50	50	1
1805513	Project	Socially Relevant Project	0	0	4	100	--	2
<b>TOTAL</b>			<b>19</b>	<b>0</b>	<b>10</b>	<b>460</b>	<b>570</b>	<b>22</b>

### VI SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805601	PCC	Internet of Things	3	0	0	30	70	3
1805602	PCC	Data Mining	3	0	0	30	70	3
1805603 1805604 1805605	PEC	<b>Professional Elective-2</b> 1. Artificial Intelligence 2. Software Testing 3. Mobile Adhoc Networks	3	0	0	30	70	3
180E501 180E502	OEC	<b>Open Elective-1</b> 1. Data Structures 2. Database Management Systems	3	0	0	30	70	3
1825609	HSC	Management Science	3	0	0	30	70	3
1805608	PCC	Mobile Application Development	3	0	0	30	70	3
1805609	PCC	Internet of Things Lab	0	0	2	50	50	1
1805610	PCC	Mobile Application Development Lab	0	0	2	50	50	1
1805611	Project	Internship	--	--	--	100	--	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>04</b>	<b>380</b>	<b>520</b>	<b>22</b>

  
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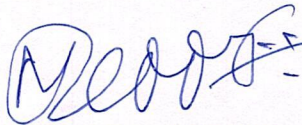


### VII SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805701	PCC	Machine Learning	3	0	0	30	70	3
1805702	PCC	Big Data Technologies	3	0	0	30	70	3
1805703 1805704 1805705	PEC	<b>Professional Elective-3</b> 1. Computer Graphics 2. Design Patterns 3. Cloud Computing	3	0	0	30	70	3
18OE503 18OE504	OEC	<b>Open Elective-2</b> 1. Python Programming 2. Computer Networks	3	0	0	30	70	3
18OE505 18OE506	OEC	<b>Open Elective-3</b> 1. Web Technologies 2. Operating Systems	3	0	0	30	70	3
1805710	PCC	Big Data Technologies Lab	0	0	2	50	50	1
1805711	PCC	Machine Learning Lab	0	0	2	50	50	1
1805712	Project	Technical Seminar	0	0	2	100	--	1
1805713	Project	Project-I	0	0	8	100	--	4
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>450</b>	<b>450</b>	<b>22</b>

### VIII SEMESTER

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1805801 1805802 1805803	PEC	<b>Professional Elective-4</b> 1. Cyber Security 2. Object Oriented Analysis & Design 3. Deep Learning	3	0	0	30	70	3
18OE507 18OE508	OEC	<b>Open Elective-4</b> 1. Software Engineering 2. Cloud Computing	3	0	0	30	70	3
1805806	Project	Project-II	0	0	12	50	50	6
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>12</b>	<b>110</b>	<b>190</b>	<b>12</b>

  
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## Department of Humanities & Sciences

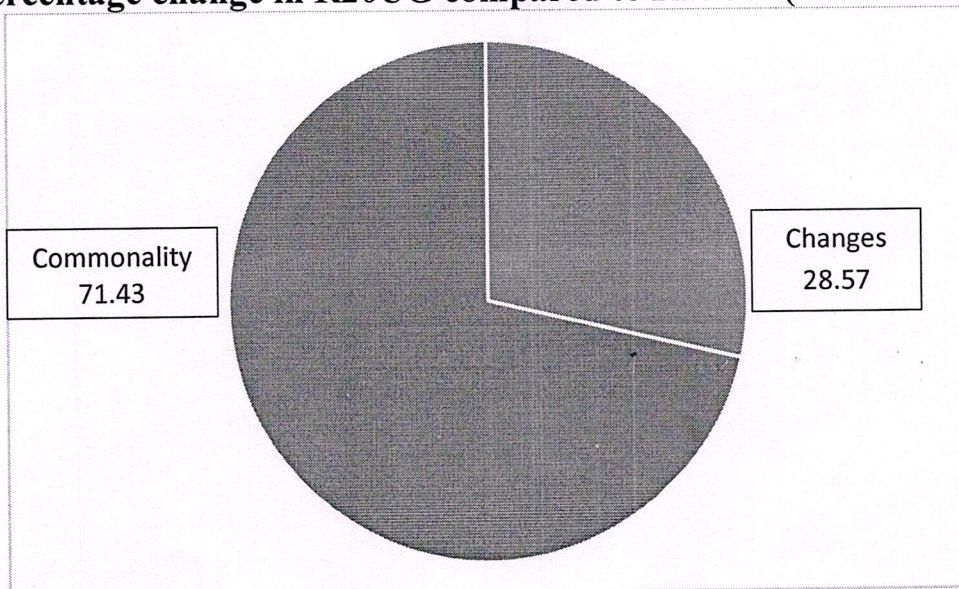
### Programme: B. Tech

### Syllabus comparison between R20UG and R18UG (AY.2021-22)

S.No	Course/Subject code	Course Title	Percentage of change in R20UG compared to R18UG
Semester- III & IV			
1	2021302/2021402 CE/ME	Probability, Statistics and Numerical Methods	0
2	2021301/2021401 ECE/EEE	Special Functions and Complex Analysis	0
3	20MC211 EEE,ECE/CE,ME,CSE	Human Values and Professional Ethics	30
4	20MC211 CE,EEE.ECE	Universal Human Values	30
5	2024301/2025401 CSE/CE,ME,ECE	Business Economics and Accounting for Engineers	40
6	2021405 CSE	Probability Theory and Statistical Methods	0
7	2025402 EEE	Fundamentals of Management for Engineers	100
Average % change in curriculum			$200/7 = 28.57$

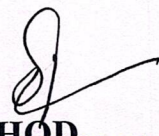



## Percentage change in R20UG compared to R18UG (A.Y.2021-22)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Ramu
2.	Sri. N. Bhaskara Reddy	Assistant Professor	N. Reddy
3.	Dr. G. Ashok Reddy	Associate Professor	G. Ashok Reddy
4.	Smt. M. Mary Jasmine	Assistant Professor	M. Mary Jasmine
5.	Sri. Y. Ramana Reddy	Assistant Professor	Y. Ramana Reddy

  
**HOD**  
**Dr. I. SREEVANI** M.Sc., Ph.D.  
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**Dean**  
**(Academics)**





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## Department of Humanities & Sciences

Programme: B. Tech

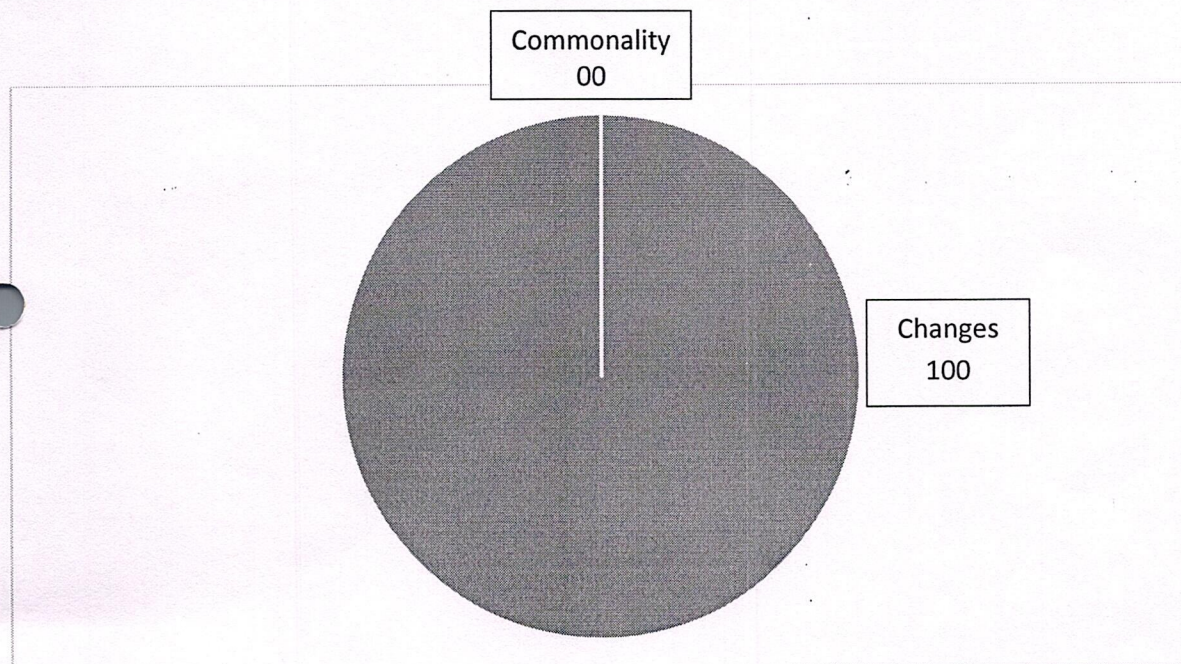
### Syllabus comparison between R18UG and R15UG (AY.2021-22)

S.No	Course Title	Course/Subject code	Percentage of change in R20UG compared to R18UG
<b>Semester: VII</b>			
1	Linear Algebra and its Applications	180E2606	100
2	Basics of Electrical, Magnetic and Opto electronic materials	180E2607	100
3	Corrosion & Control	180E2608	100
4	Professional Communication	180E2609	100
5	Digital and Social Media Management	180E2610	100
6	Number Theory & Cryptography	180E2611	100
7	Physics of Renewable Energy	180E2612	100
8	Fuel Technology	180E2613	100
9	Academic Writing	180E2614	100
10	Basics Financial Management for Engineers	180E2615	100
<b>Semester: VIII</b>			
11	Operations Research	180E2616	100
12	Fundamentals of Quantum Computation and Nano photonics	180E2617	100



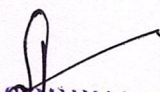
14	Creative Writing	180E2619	100
15	Materials Management	180E2620	100
Average % change in curriculum			100


### Percentage change in R18UG compared to R15UG (A.Y.2021-22)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Ramu
2.	Sri. N. Bhaskara Reddy	Assistant Professor	B. Reddy
3.	Dr. G Ashok Reddy	Associate Professor	G. Ashok Reddy
4.	Smt. M. Mary Jasmine	Assistant Professor	M. Mary
5.	Sri. Y. Ramana Reddy	Assistant Professor	Y. Ramana Reddy

  
**Dr. I. SUBBAVANI** M.Sc., Ph.D.  
 Head of Humanities & Sciences  
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 KADAPA - 516 005

  
**Dean**  
 (Academics)



# **K.S.R.M COLLEGE OF ENGINEERING**

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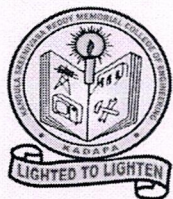
## **INDEX**

### **SYLLABUS COMPARISION**

**A.Y 2020-21**

<b>S.NO</b>	<b>PROGRAMME NAME</b>
<b>1</b>	<b>Department of Civil Engineering</b>
<b>2</b>	<b>Department of Electrical &amp; Electronics Engineering</b>
<b>3</b>	<b>Department of Mechanical Engineering</b>
<b>4</b>	<b>Department of Electronics and Communication Engineering</b>
<b>5</b>	<b>Department of Computer Science Engineering</b>
<b>6</b>	<b>Department of Humanities and Sciences</b>





# K.S.R.M. COLLEGE OF ENGINEERING

## (UGC-AUTONOMOUS)

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Department of Civil Engineering

### Syllabus comparison between R18UG and R15UG

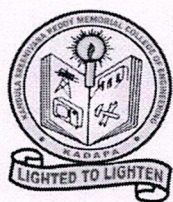
**Programme: B. Tech.**

**Branch: Civil Engineering**

**Semester: V and VI**

Sl. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
1	1801501	Solid Mechanics – 2	25
2	1801502	Hydraulic Machinery	20
3	1801503	Structural Analysis - 1	70
4	1801504	Geotechnical Engineering	0
5	1801505	Environmental Engineering	80
6	1801506	Transportation Engineering	30
7	1801507	Advanced Structural Analysis by Matrix Methods	100
8	1801508	Pre-Stressed Concrete	0
9	1801509	Ground Improvement Techniques	100
10	1801510	Remote Sensing and GIS	0
11	1801511	Highway Construction and Management	100
12	1801512	Railway Engineering	90
13	1801513	Surface Hydrology	100
14	1801514	Geotechnical Engineering Lab	50
15	1801515	Transportation Engineering Laboratory	50
16	1801516	Environmental Engineering Laboratory	0
17	1801602	Concrete Technology	35





# K.S.R.M. COLLEGE OF ENGINEERING (UGC-AUTONOMOUS)

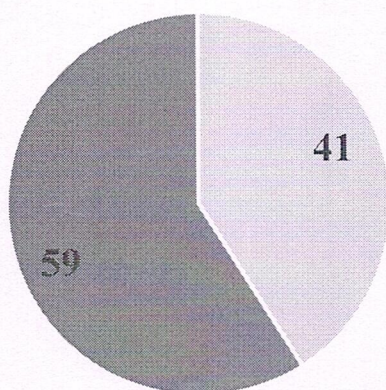
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18	1801603	Structural Analysis-2	70
19	1801604	Design of Reinforced Concrete Structures – 1	30
20	1801605	Foundation Engineering	0
21	1801606	Water Resources Engineering – 1	15
22	1801607	Advanced Concrete Structures	100
23	1801608	Design of Structural Systems (Tall Buildings)	100
24	1801609	Airport Planning and Design	100
25	1801610	Port and Harbour Engineering	100
26	1801611	Environmental Laws and Policy	100
27	1801612	Urban Hydrology and Hydraulics	100
28	1801614	Concrete Technology Lab	50
29	1801615	Foundation Engineering Lab	100
Average Percentage change in Curriculum			59

**% change in R18UG compared to R15UG**



■ Commanality ■ Changes





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## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Sreenivasa Reddy	Professor	
2.	Dr. V. Giridhar	Professor	
3.	Dr. T. Kiran Kumar	Professor	
4.	Dr. P. Kishore Kumar Reddy	Assistant Professor	

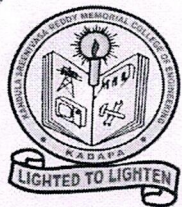
**HOD**

Head

Department of Civil Engineering  
K.S.R.M. College of Engineering  
(Autonomous)  
KADAPA - 516 003. (A.P.)

**Dean Academics**





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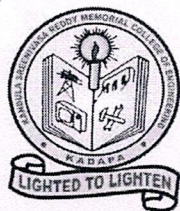
## Department of Electrical and Electronics Engineering Syllabus comparison between R18UG and R15UG (AY 2020-21)

Programme: B. Tech.

Semester: V and VI

S. No.	Subject code	Subject Name	Percentage change in R18UG Compared to R15UG
<b>V Semester</b>			
1	1804501	Microprocessors & Microcontrollers	00
2	1814502	Linear Digital IC Applications	00
3	1802503	Power Electronics	10
4	1802504	Power System Operation & Control	15
5	1802505	Energy Auditing & Demand Side Management	100
6	1802506	Electrical Machine Design	100
7	1802507	Advanced Control Systems	100
8	1802508	Instrumentation	100
9	1802509	Energy Conversion Systems	100
10	1802510	Electrical Machines - II Lab	05
11	1802511	Control Systems & Simulation Lab	05
13	1824512	Advanced English Communication Lab	00
14	1802514	Socially Relevant Projects	100
<b>VI Semester</b>			
15	1825601	Management Science	00
16	1802602	Power Semiconductor Drives	10
17	1802603	Switchgear & Protection	10
18	1802604	Power System Deregulation	100
19	1802605	High Voltage DC Transmission	05
20	1802606	PLC & its Applications	100
21	1802607	Signals & Systems	15
22	1802608	Electric & Hybrid Vehicles	100
23	1802609	Power Electronics & Simulation Lab	00
24	1802610	Power Systems - I Lab	05
25	1805611	Internet of Things Lab	100
26	1802612	Internship	100
27	18OE201	Fundamentals of Control Systems (OE-I)	100
28	18OE202	MATLAB Programming (OE-I)	100
<b>Average Percentage change in Curriculum</b>			50.46





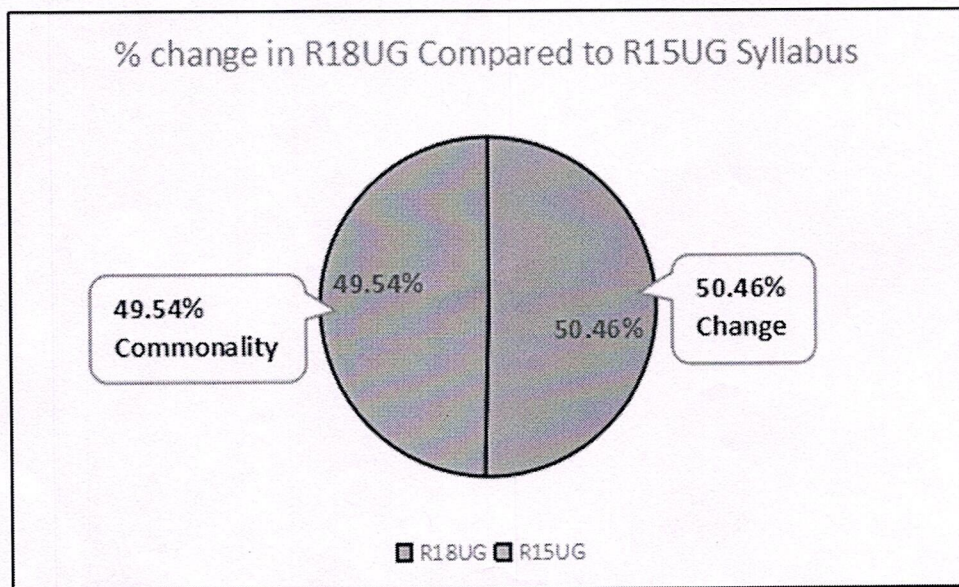
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## Internal Evaluation Committee:

S. No	Name of the Faculty	Designation	Signature
1.	Dr. K. Amaresh	Professor	<i>Amaresh</i>
2.	Mr. K. Rama Mohan Reddy	Associate Professor	<i>Ram Mohan Reddy</i>
3.	Smt. Saleha Tabassum	Assistant Professor	<i>Saleha Tabassum</i>
4.	Mr. K. Kalyan Kumar	Assistant Professor	<i>Kalyan Kumar</i>

*Amaresh*

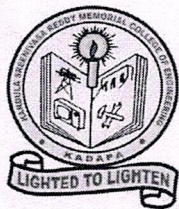
HoD

HEAD

Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Cuddapah - 516 003

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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R20UG and R18UG (AY 2020-2021)

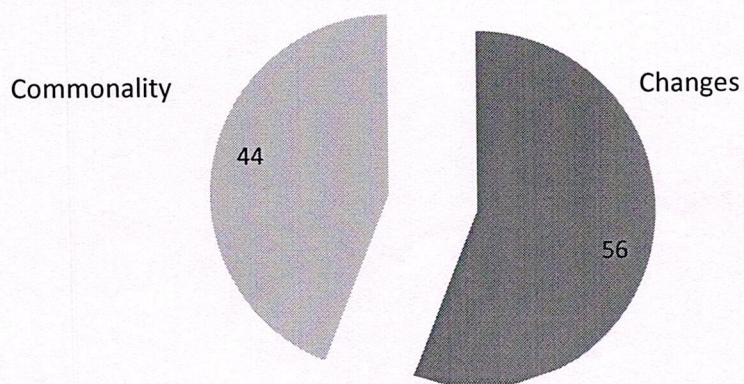
Programme : B.Tech

Branch: Mechanical Engineering

Semester: I and II

S.no	Course/subject code	Course Title	Percentage of change in R20UG compared to R18UG
1.	20EW105	Engineering Workshop	0
2.	2003204	Material Science	100
3.	2003205	Engineering Drawing	40
4.	2003206	Engineering Drawing Lab	40
5.	2003209	Material Science Lab	100
Average percentage Change in Curriculum			56

**% Change in R20UG compared to R18UG**







# K.S.R.M. COLLEGE OF ENGINEERING

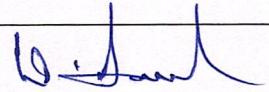
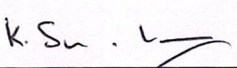
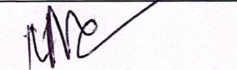

(UGC-AUTONOMOUS)

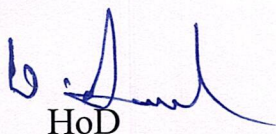
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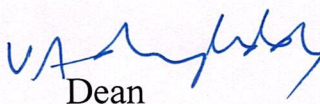
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## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr.D. Ravi kanth	Professor and HOD	
2.	Sri. K.Suresh Kumar	Associate Professor	
3.	Sri R. Ramakrishna Reddy	Associate Professor	
4.	Dr. P. Sreenivas	Associate Professor	

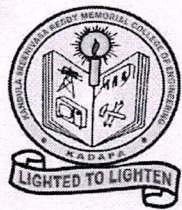
  
HoD

**Professor & Head**  
**Department of Mechanical Engineering**  
**K.S.R.M. College of Engineering**  
**KADAPA - 516 003.**

  
Dean

(Academics)





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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus comparison between R18UG and R15UG (AY 2020-2021)

Programme : B.Tech

Branch: Mechanical Engineering

Semester: V and VI

S.no	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1.	1803501	Heat transfer	15
2.	1803502	DME-1	5
3.	1803503	Metrology	100
4.	1803504	Dynamics of Machinery	5
5.	1803506	Automobile Engineering	100
6.	1803507	Mechanical Behavior of Metals	100
7	1803508	Renewable Technologies	100
8	1803509	Supply Chain Management	100
9	1803510	Manufacturing Methods in precision of Engineering	100
10	1803511	Design of Manufacturing	100
11	1803512	Additive Manufacturing	100
12	1803513	ME Lab-1 (Thermal Engineering)	0
13	1803514	ME Lab-2(CAD/CAM Lab)	100
14	1803515	Socially Relevant Project	100
15	1803601	Machine tools	100





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16	1803602	DME-II	10
17	1803603	Operations Research	20
18	1803604	Power Plant Engineering	10
19	1803605	Gas Turbines and Jet Propulsion System	100
20	1803606	Computer aided process Planning	100
21	1803607	Concurrent Engineering	100
22	1803608	Introduction to A.I and Expert systems	100
23	1803609	Virtual Reality System	100
24	1803610	Autotronics	100
25	1803611	Energy System Engineering	100
26	1803612	Robotics & Applications in Engineering	100
27	1803613	Machine tools lab	10
28	1803614	H.T Lab	10
29	1803615	Internship	100
30	1803616	Organizational Behavior	100
Average Percentage change in Curriculum			72.83





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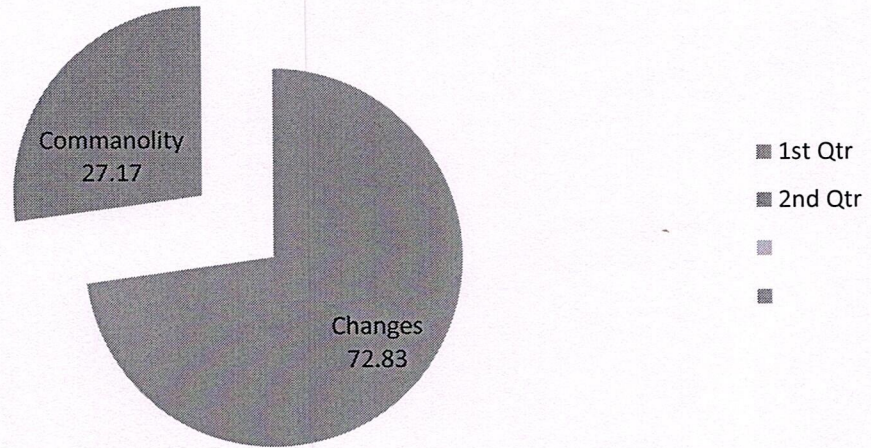
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## % Change in R18UG Compared to R15UG



Internal Evaluation Committee :

S.No	Name of the Faculty	Designation	Signature
1.	Dr.D. Ravi kanth	Professor and HOD	
2.	Sri. K.Suresh Kumar	Associate Professor	
3.	Sri R. Ramakrishna Reddy	Associate Professor	
4.	Dr. P. Sreenivas	Associate Professor	

HoD

Professor & Head  
Department of Mechanical Engineering  
K.S.R.M. College of Engineering  
KADAPA - 516 003.

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Department of Electronics and Communication Engineering

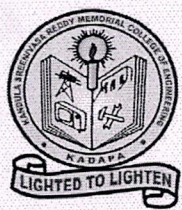
## Syllabus comparison between R18UG and R15UG

Programme: B. Tech  
Semester : V and VI

Branch: Electronics and Communication Engineering

	Course code	Course Title	Percentage change in R18UG Compared to R15UG
1	1804501	Microprocessors & Microcontrollers	30
2	1804502	Digital Signal Processing	20
3	1804504	Analog Communication	5
4	1804505	Digital IC Applications	50
5	1804506	Antennas and Wave Propagation	5
6	1804507	Microprocessors & Microcontrollers Lab	30
7	1804508	Analog and Digital IC Lab	50
8	1804509	Socially Relevant Project	100
9	1804601	Embedded Systems	70
10	1804602	Digital Communication	5
11	1804603	Microwave Engineering	20
		Professional Elective I	
12	1804604	Fiber-Optic Communication	5





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13	1804605	Data structures and Algorithms	20
14	1804606	Digital Signal Processors & Architectures	100
15	1804607	Analog IC Design	100
16	1804608	Introduction to MEMS	100
17	1804609	Analog and digital communication Lab	5
18	1804610	Digital Signal Processing Lab	5
19	1804611	Micro Wave & Optical Communication Lab	0
20	1804613	Internship	100
Average Percentage change in Curriculum			39%





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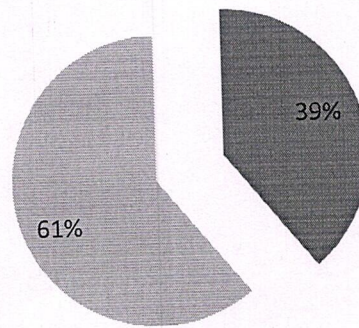
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## Syllabus comparison between R18UG and R15UG

■ Changes ■ Commonality



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
2.	Dr. M. V. Narayana	Professor	
3.	Sri R. V. Sreehari	Asso. Professor	
4.	Dr. S. L. Prathapa Reddy	Asso. Professor	

HoD

Professor & H.O.D.  
Department of E.C.E.  
K.S.R.M. College of Engineering  
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## Syllabus Comparison between R20UG and R18UG, AY 2020-21

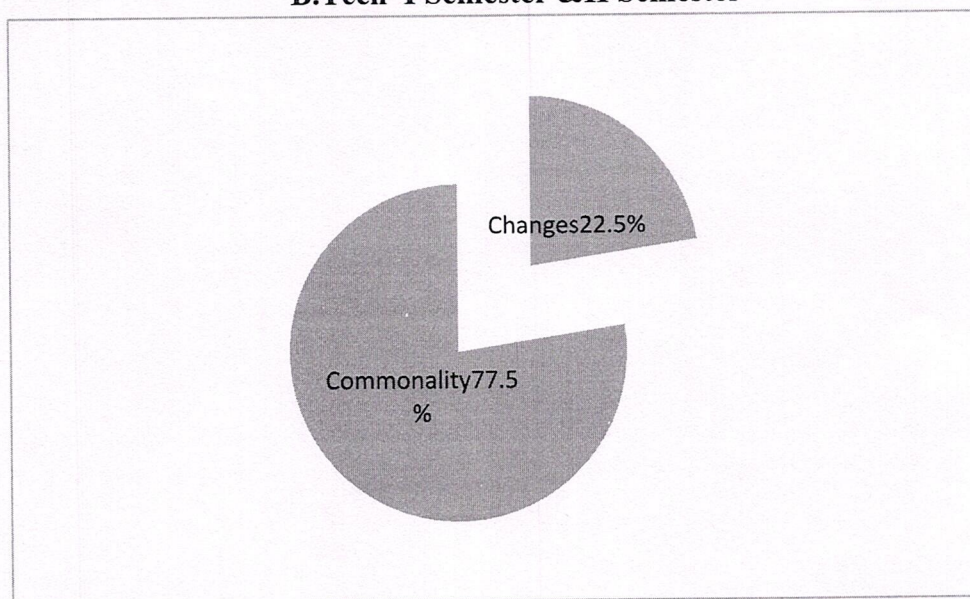
Programme: B.Tech

Branch: Computer Science & Engineering

Semester: I and II

S.No	Course Code	Course Title	Percentage of change in R20UG compared to R18UG
1	2005103	C - Programming & Data Structures	45
2	2005108	C - Programming & Data Structures Lab	45
3	2005204	Python Programming	0
4	2005209	Python Programming Lab	0
Average Percentage Changes in Curriculum (%)			22.5

Percentage change in R20UG Syllabus compared to R18UG Syllabus  
B.Tech I Semester & II Semester



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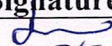
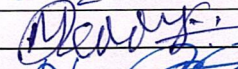
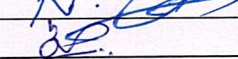

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**Internal Evaluation Committee:**

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1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Smt. B. Manorama Devi	Assistant Professor	

**HOD/CSE**

**Dr. V. LOKESWARA REDDY**  
M.Tech., Ph.D.  
Professor & HOD CSE  
K.S.R.M. College of Engineering (Autonomous)  
KADAPA - 516 005.



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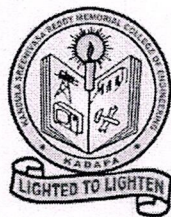
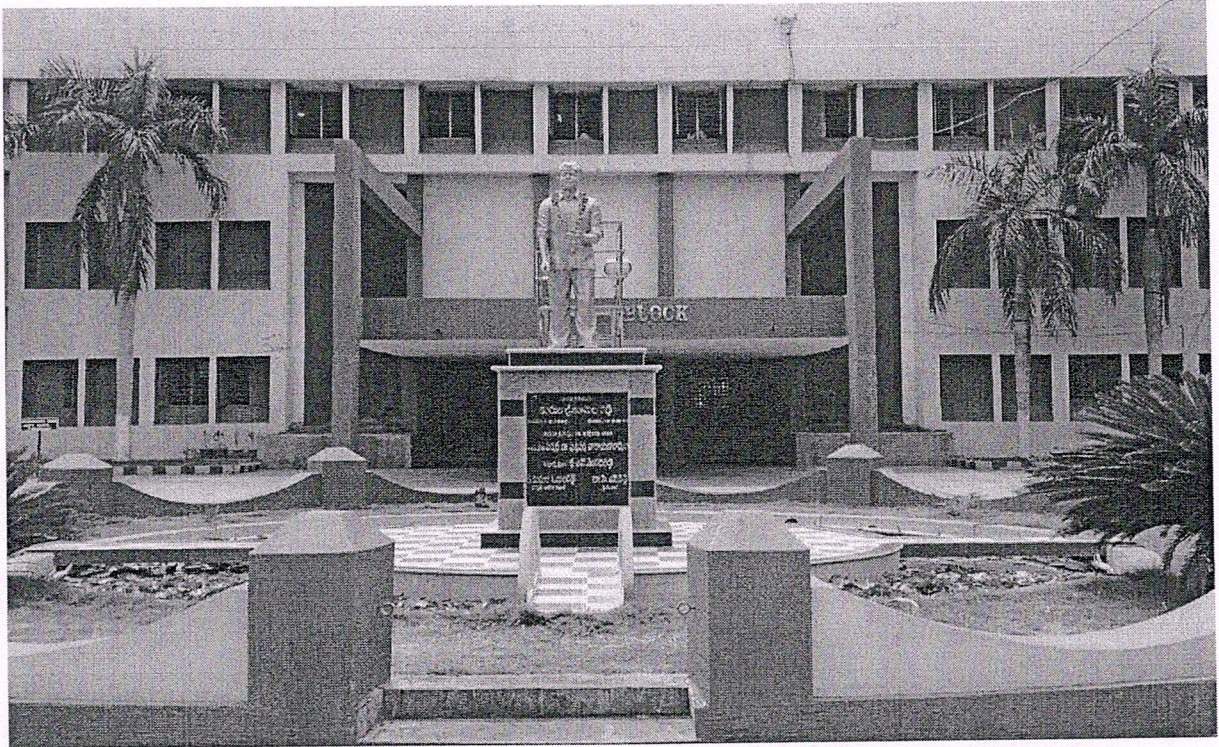
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**UG Programs in Engineering (R20UG)  
Curriculum and Syllabus for**

**I - VIII Sem B.Tech**

**Department of Computer Science and Engineering**



**Kandula Srinivasa Reddy Memorial College of Engineering (Autonomous)  
Kadapa 516003 AP**

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Semester-0(Theory-8, Lab-7) Induction Program

S.No	Course Name	Category	L	T	P	C
1	Physical Activities-Sports, Yoga & Meditation, plantation	MC	0	0	6	0
2	Career Counseling	MC	2	0	2	0
3	Orientation to all branches-career options, tools etc.	ESC	3	0	0	0
4	Orientation on admitted branch-corresponding labs, tools & platforms	EC	2	0	3	0
5	Proficiency Modules & Productivity Tools	ES	2	1	2	0
6	Assessment on basic aptitude and mathematical skills	MC	2	0	3	0
7	Remedial Training in foundation courses	MC	2	1	2	0
8	Human values & Professional ethics	MC	3	0	0	0
9	Communication skills-focus on listening, speaking, reading, writing skills	BS	2	1	2	0
10	Concepts of programming	ES	2	0	2	0

L-Lecture, T-Tutorial, P-Practical

I Semester (Theory- 5, Labs-04)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021101	Linear Algebra and Calculus	BSC	3	0	0	40	60	3
2	2023102	Chemistry	BSC	3	0	0	40	60	3
3	2005103	C-Programming & Data Structure	ESC	3	0	0	40	60	3
4	2014104	Basic Electrical & Electronics Engineering	ESC	3	0	0	40	60	3
5	20EW105	Engineering Workshop	ESC	0	0	3	40	60	1.5
6	2005106	IT Workshop	ESC	0	0	3	40	60	1.5
7	2023107	Chemistry Lab	BSC	0	0	3	40	60	1.5
8	2005108	C-Programming & Data Structures Lab	ESC	0	0	3	40	60	1.5
9	2014109	Basic Electrical & Electronics Engineering Lab	ESC	0	0	3	40	60	1.5
Total				12	00	15	360	540	19.5

  
**Dr. V. LOKESWARA REDDY**  
 M.Tech., Ph.D.,  
 Professor & HOD CSE  
 K.S.R.M. College of Engineering (Autonomous)  
 KADAPA - 516 005.



## II Semester (Theory-05, Lab-04)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2021201	Differential Equations & Vector Calculus	BSC	3	0	0	40	60	3
2	20AP202	Applied Physics	BSC	3	0	0	40	60	3
3	2024203	Communicative English	HS MC	3	0	0	40	60	3
4	2005204	Python Programming	ESC	3	0	0	40	60	3
5	2003205	Engineering Drawing	ESC	1	0	2	40	60	2
6	2003206	Engineering Drawing Lab	ESC	0	0	2	40	60	1
7	20AP207	Applied Physics Lab	BSC	0	0	3	40	60	1.5
8	2024208	Communicative English Lab	HS MC	0	0	3	40	60	1.5
9	2005209	Python Programming Lab	ESC	0	0	3	40	60	1.5
10	20MC210	Environmental Science	MC	3	0	0	40	00	0.0
<b>Total</b>				<b>16</b>	<b>00</b>	<b>13</b>	<b>390</b>	<b>540</b>	<b>19.5</b>

## III Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2024301	Business Economics and Accounting for Engineers	HSM C	3	0	0	40	60	3
2	2005302	Advanced Data Structures	PCC	3	0	0	40	60	3
3	2005303	Formal Languages & Automata Theory	PCC	3	0	0	40	60	3
4	2005304	Object Oriented Programming through JAVA	PCC	3	0	0	40	60	3
5	2005305	Data Base Management Systems	PCC	3	0	0	40	60	3
6	2005306	Advanced Data Structures Lab	PCC	0	0	3	40	60	1.5
7	2005307	JAVA Lab	PCC	0	0	3	40	60	1.5
8	2005308	Data Base Management Systems Lab	PCC	0	0	3	40	60	1.5
9	2005309	Skill Oriented Course Exploring Data Analysis with R/ NASSCOM Courses	SC	0	0	4	40	60	2.0
<b>Total</b>				<b>15</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>540</b>	<b>21.5</b>

Dr. V. LOKESWARA REDDY

M.Tech., Ph.D.,

Professor & HOD CSE

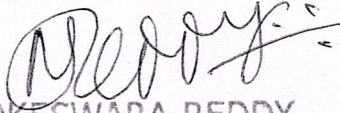
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IV Semester (Theory-05, Lab-03)

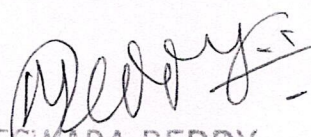
S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005401	Principles of Operating Systems	PCC	3	0	0	40	60	3
2	2005402	Computer Organization	PCC	3	0	0	40	60	3
3	2004403	Microprocessors & Microcontrollers	ESC	3	0	0	40	60	3
4	2005404	Digital Logic Circuits & Design	PCC	3	0	0	40	60	3
5	2021405	Probability Theory & Statistical Methods	BSC	3	0	0	40	60	3
6	2014406	Microprocessors & Microcontrollers Lab	ESC	0	0	3	40	60	1.5
7	2005407	Principles of Operating Systems Lab	PCC	0	0	3	40	60	1.5
8	2005408	Digital Logic Design Lab	PCC	0	0	3	40	60	1.5
9	2005409	Skill Oriented Course Advanced Python Programming/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	2024410	Universal Human Values	HSMC	3	0	0	40	60	3.0
<b>Total</b>				<b>18</b>	<b>00</b>	<b>13</b>	<b>400</b>	<b>600</b>	<b>24.5</b>

  
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V Semester (Theory-05, Lab-02)

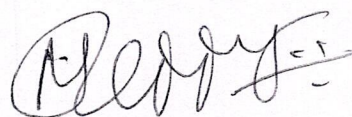
S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005501	Software Engineering	PCC	3	0	0	40	60	3
2	2005502	Design and Analysis of Algorithms	PCC	3	0	0	40	60	3
3	2005503	Computer Networks	PCC	3	0	0	40	60	3
		Open Elective Course-I(OEC-I)							
4	200E501	Data Structures	OEC	3	0	0	40	60	3
	200E502	Database Management Systems	OEC	3	0	0	40	60	3
		Professional Elective Course -I (PEC-I)							
5	2005504	Web Technologies	PEC	3	0	0	40	60	3
	2005505	Multimedia Systems	PEC	3	0	0	40	60	3
	2005506	Distributed Systems	PEC	3	0	0	40	60	3
6	2005507	DAA Lab	PCC	0	0	3	40	60	1.5
7	2005508	Professional Elective Course -I Lab	PCC	0	0	3	40	60	1.5
8	20245SC	Soft Skill Oriented Course Advanced English & Communication Lab/Professional Communication Lab	SC	0	0	4	40	60	2.0
9	2005510	Community Service Project	PROJ	0	0	0	100		1.5
10	20MC509	Constitution of India	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>10</b>	<b>420</b>	<b>480</b>	<b>21.5</b>

  
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VI Semester (Theory-05, Lab-03)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	E M	CR
1	2005601	Internet of Things	PCC	3	0	0	40	60	3
2	2005602	Data Mining	PCC	3	0	0	40	60	3
3	2005603	Cryptography & Network Security	PCC	3	0	0	40	60	3
		Open Elective Course -II(OEC-II)							
4	20OE503	Java Programming	OEC	3	0	0	40	60	3
	20OE504	Web Designing	OEC	3	0	0	40	60	3
		Professional Elective Course – II (PEC-II)							
5	2005604	Artificial Intelligence	PEC	3	0	0	40	60	3
	2005605	Software Testing	PEC	3	0	0	40	60	3
	2005606	Adhoc & Sensor Networks	PEC	3	0	0	40	60	3
6	2005607	IOT Lab	PCC	0	0	3	40	60	1.5
7	2005608	Data Mining Lab	PCC	0	0	3	40	60	1.5
8	2005609	Network Security Lab	PCC	0	0	3	40	60	1.5
9	2005610	Skill Oriented Course Mobile Application Development/ NASSCOM Courses	SC	0	0	4	40	60	2.0
10	20MC612	Management Organizational Behavior	MC	2	0	0	40	00	00
<b>Total</b>				<b>17</b>	<b>00</b>	<b>13</b>	<b>440</b>	<b>540</b>	<b>21.5</b>



Dr. V. LOKESWARA REDDY

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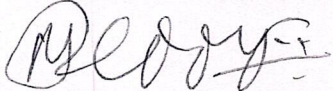
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VII Semester (Theory-06)

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
		Professional Elective Course-III (PEC-III)							
1	2005701	Compiler Design	PEC	3	0	0	40	60	3
	2005702	Computer Graphics	PEC	3	0	0	40	60	3
	2005703	Cyber Security	PEC	3	0	0	40	60	3
		Professional Elective Course-IV (PEC-IV)							
2	2005704	Machine Learning	PEC	3	0	0	40	60	3
	2005705	Object Oriented Analysis & Design	PEC	3	0	0	40	60	3
	2005706	Natural Language Processing	PEC	3	0	0	40	60	3
		Professional Elective Course-V (PEC-V)							
3	2005707	Cloud Computing	PEC	3	0	0	40	60	3
	2005708	Deep Learning	PEC	3	0	0	40	60	3
	2005709	Computer Vision	PEC	3	0	0	40	60	3
		Open Elective Course-III(OEC-III)							
4	200E505	Operating System	OEC	3	0	0	40	60	3
	200E506	R Programming	OEC	3	0	0	40	60	3
		Open Elective Course-IV(OEC-IV)							
5	200E508	Python Programming	OEC	3	0	0	40	60	3
	200E509	Cloud Computing	OEC	3	0	0	40	60	3
		Humanities & Social Science Elective							
6	2006701	Human Resource Development	HSM C	3	0	0	40	60	3
	2006702	Digital Marketing	HSM C	3	0	0	40	60	3
	2006703	Project Management	HSM C	3	0	0	40	60	3
7	2005710	Skill Oriented Course Big Data Technologies/ NASSCOM Courses	SC	0	0	4	40	60	2
8	2005711	Internship	INT	0	0	0	100	0	3
<b>Total</b>				<b>18</b>	<b>00</b>	<b>4</b>	<b>380</b>	<b>420</b>	<b>23</b>

  
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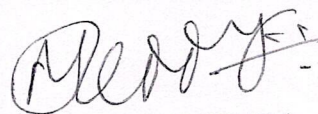


VIII Semester

S.No	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1	2005801	Major Project/ Internship (6Months)	PROJ	0	0	24	40	60	12
Total									12

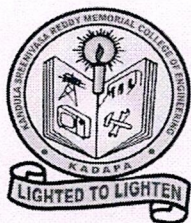
Structure of the Undergraduate Engineering Program:

S.No.	Category	Code	Credits	APSCHE Suggested Credits
1	Humanities & Social Sciences including Management Sciences	HSMC	10.5	10
2	Basic Science Courses	BSC	18	21
3	Engineering Science Courses	ESC	24	24
4	Professional Core Courses	PCC	54	51
5	Open Elective Courses	OEC	12	12
6	Professional Elective Courses	PEC	15	15
7	Internship & Project Work	PROJ	16.5	17
8	Mandatory Courses	MC	03	Non-Credit
9	Skill Oriented Courses	SC	10	10
	Total Credits		163	160



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## Syllabus Comparison between R18UG and R15UG, AY 2020-2021

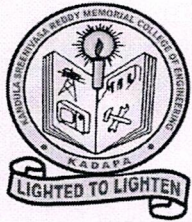
Programme: B.Tech

Branch: Computer Science & Engineering

Semester: V and VI

S.no	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1	1805501	Web Technologies	10
2	1805502	Data Base Management Systems	5
3	1805503	Computer Networks	15
4	1805504	Software Engineering	20
5	1805505	Human Computer interaction	100
6	1805506	Multimedia Systems	100
7	1805507	Distributed Systems	80
8	1805508	Compiler Design	0
9	1805509	Constitution of India	100
10	1805510	Database lab	20
11	1805511	Web Technologies	20
12	1805512	Advanced English and Communications Skills lab	100
13	1805513	Socially Relevant Project	100
14	1805601	Internet of Things	20
15	1805602	Data Mining	70
16	1805603	Artificial Intelligence	10
17	1805604	Software Testing	10
18	1805605	Mobile Adhoc Networks (PEC – 2)	100
19	18OE501	Data Structures (OE-1)	100
20	18OE502	Database Management Systems (OE-1)	100
21	1805608	Mobile Application Development	0
22	1805609	Internet of Things Lab	20
23	1805610	Mobile Application Development Lab	20
Average Percentage Changes in Curriculum (%)			48.7





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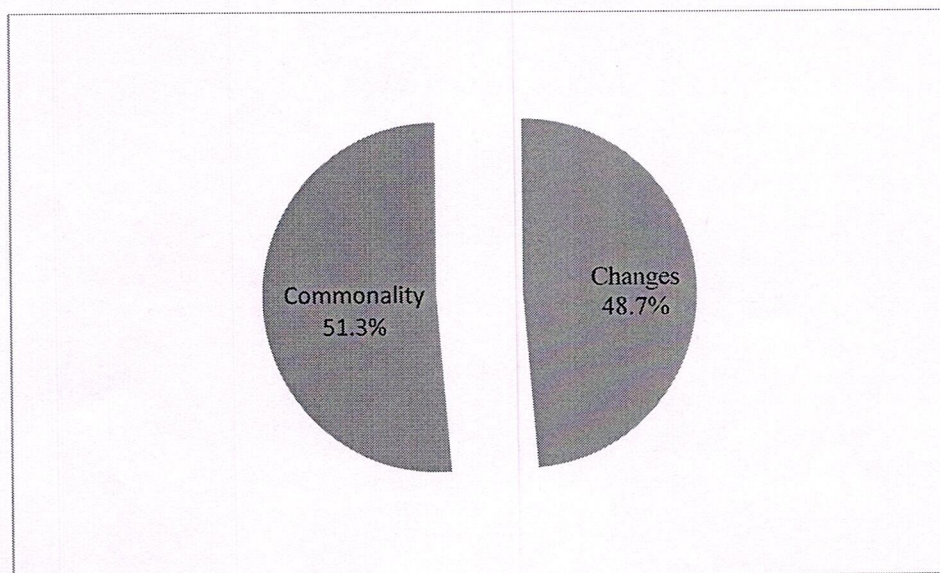
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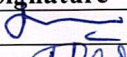
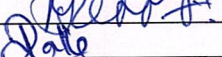


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## Percentage change in R18UG Syllabus Compared to R15UG Syllabus

### B.Tech V Semester and VI Semester



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	M.V.Rathnamma	Associate Professor	
4	B.Manorama Devi	Assistant Professor	



HoD/CSE

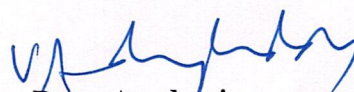
Dr. M. Sreenivasulu,

M E, Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

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Dean Academics



**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**

**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Tech CSE (I Sem - VIII Sem) (R18 Regulations)**

**(Effective from 2018-19 for Regular students and from 2019-20 for  
Later Entry students)**



**KANDULA SREENIVASA REDDY MEMORIAL COLLEGE OF  
ENGINEERING(AUTONOMOUS)**

**KADAPA - 516005, AP**

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## COMPUTER SCIENCE AND ENGINEERING

### I Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – I	3	1	0	30	70	4
1822104	BSC	Engineering Physics	3	1	0	30	70	4
1802103	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803107	ESC	Engineering Graphics & Design	1	0	4	50	50	3
1822108	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802109	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803110	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
		<b>TOTAL</b>	<b>11</b>	<b>3</b>	<b>13</b>	<b>290</b>	<b>410</b>	<b>20.5</b>

### II Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – II	3	1	0	30	70	4
1823202	BSC	Engineering Chemistry	3	1	0	30	70	4
1824203	HSMC	English	2	0	0	30	70	2
1805204	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823207	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805208	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824209	HSMC	English Lab	0	0	2	50	50	1
		<b>TOTAL</b>	<b>11</b>	<b>2</b>	<b>9</b>	<b>270</b>	<b>430</b>	<b>17.5</b>



**Dr. M. Sreenivasulu,**

**M. E., Ph. D.**

**Professor & HOD CSE**

**K.S.R.M. College of Engineering**

**K A D A P A - 516 003**



### III Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
18993M1	MC	Environmental Science (Mandatory Course-1)	2	0	0	30	--	0
1804302	PN	Basics of Electronics Engineering	3	0	0	30	70	3
1805303	PCC	Data Structures	3	0	0	30	70	3
1805304	PCC	Discrete Mathematics	3	0	0	30	70	3
1805305	PCC	Digital Logic Design	3	0	0	30	70	3
1805306	PCC	Python Programming	3	0	0	30	70	3
1825307	HSMC	Managerial Economics and Financial Accounting	3	0	0	30	70	3
1814311	PN	Basics of Electronics Engineering Lab	0	0	2	50	50	1
1805309	PCC	Data Structures Lab	0	0	3	50	50	1.5
1805310	PCC	Python Programming Lab	0	0	3	50	50	1.5
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>8</b>	<b>360</b>	<b>570</b>	<b>22</b>

### IV SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1823401	BSC	Biology for Engineers	2	0	0	30	70	2
1821402	BSC	Probability & Statistics	3	0	0	30	70	3
1805403	PCC	Computer Organization	3	0	0	30	70	3
1805404	PCC	Operating Systems	3	0	0	30	70	3
1805405	PCC	Design and Analysis of Algorithms	3	0	0	30	70	3
1805406	PCC	Java Programming	3	0	0	30	70	3
1805407	PCC	Formal Languages and Automata Theory	3	0	0	30	70	3
1805408	PCC	Java Programming lab	0	0	2	50	50	1
1805410	PCC	Operating Systems Lab	0	0	2	50	50	1
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>4</b>	<b>310</b>	<b>590</b>	<b>22</b>



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### V SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805501	PCC	Web Technologies	2	0	0	30	70	2
1805502	PCC	Data Base Management Systems	3	0	0	30	70	3
1805503	PCC	Computer Networks	3	0	0	30	70	3
1805504	PCC	Software Engineering	3	0	0	30	70	3
1805505 1805506 1805507	PEC	<b>Professional Elective-1</b> 1. Human Computer Interaction 2. Multimedia Systems 3. Distributed Systems	3	0	0	30	70	3
1805508	PCC	Compiler Design	3	0	0	30	70	3
1825509	PCC	Constitution of India	2	-	-	30	--	0
1805510	PCC	Databases Lab	0	0	2	50	50	1
1805511	PCC	Web Technologies Lab	0	0	2	50	50	1
1824512	HSC	Advanced English and Communications Skills lab	0	0	2	50	50	1
1805513	Project	Socially Relevant Project	0	0	4	100	--	2
<b>TOTAL</b>			<b>19</b>	<b>0</b>	<b>10</b>	<b>460</b>	<b>570</b>	<b>22</b>

### VI SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805601	PCC	Internet of Things	3	0	0	30	70	3
1805602	PCC	Data Mining	3	0	0	30	70	3
1805603 1805604 1805605	PEC	<b>Professional Elective-2</b> 1. Artificial Intelligence 2. Software Testing 3. Mobile Adhoc Networks	3	0	0	30	70	3
180E501 180E502	OEC	<b>Open Elective-1</b> 1. Data Structures 2. Database Management Systems	3	0	0	30	70	3
1825609	HSC	Management Science	3	0	0	30	70	3
1805608	PCC	Mobile Application Development	3	0	0	30	70	3
1805609	PCC	Internet of Things Lab	0	0	2	50	50	1
1805610	PCC	Mobile Application Development Lab	0	0	2	50	50	1
1805611	Project	Internship	--	--	--	100	--	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>04</b>	<b>380</b>	<b>520</b>	<b>22</b>



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### VII SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805701	PCC	Machine Learning	3	0	0	30	70	3
1805702	PCC	Big Data Technologies	3	0	0	30	70	3
1805703 1805704 1805705	PEC	<b>Professional Elective-3</b> 1. Computer Graphics 2. Design Patterns 3. Cloud Computing	3	0	0	30	70	3
18OE503 18OE504	OEC	<b>Open Elective-2</b> 1. Python Programming 2. Computer Networks	3	0	0	30	70	3
18OE505 18OE506	OEC	<b>Open Elective-3</b> 1. Web Technologies 2. Operating Systems	3	0	0	30	70	3
1805710	PCC	Big Data Technologies Lab	0	0	2	50	50	1
1805711	PCC	Machine Learning Lab	0	0	2	50	50	1
1805712	Project	Technical Seminar	0	0	2	100	--	1
1805713	Project	Project-I	0	0	8	100	--	4
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>450</b>	<b>450</b>	<b>22</b>

### VIII SEMESTER

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1805801 1805802 1805803	PEC	<b>Professional Elective-4</b> 1. Cyber Security 2. Object Oriented Analysis & Design 3. Deep Learning	3	0	0	30	70	3
18OE507 18OE508	OEC	<b>Open Elective-4</b> 1. Software Engineering 2. Cloud Computing	3	0	0	30	70	3
1805806	Project	Project-II	0	0	12	50	50	6
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>12</b>	<b>110</b>	<b>190</b>	<b>12</b>

  
**Dr. M. Sreenivasulu,**  
 M E, Ph. D.  
 Professor & HOD CSE  
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## Department of Humanities & Sciences

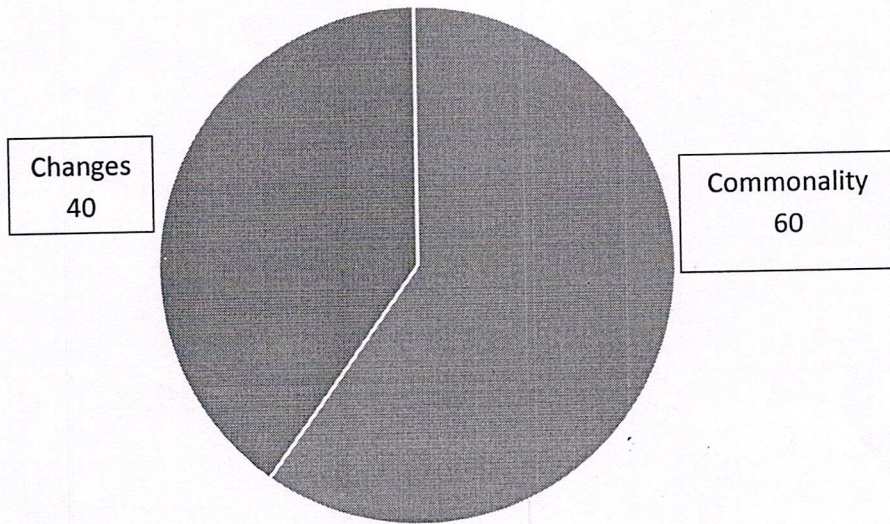
### Programme: B. Tech

#### Syllabus comparison between R20UG and R18UG (AY.2020-21)

S.No	Course/Subject code	Course Title	Percentage of change in R20UG compared to R18UG
<b>Semester: I &amp; II</b>			
1.	2023102/2023202 CSE/EEE,ECE	Chemistry	50
2.	20EC102/20EC202 ME/CE	Engineering Chemistry	70
3.	2021101 All Branches	Linear Algebra and Calculus	75
4.	2021201 All Branches	Differential Equations and Vector Calculus	75
5.	2024103/2024203 CE,EEE,ECE/ME,CSE	Communicative English	20
6.	20MC210 All Branches	Environmental Science	10
7.	20EP102/20EP202 CE/ME	Engineering Physics	40
8.	20AP102/20AP202 EEE,ECE/CSE	Applied Physics	30
9.	2023107/2023208 CSE/EEE,ECE	Chemistry Lab	50
10.	20EC107/20EC207 ME/CE	Engineering Chemistry Lab	50
11.	20EP107/20EP207 CE/ME	Engineering Physics Lab	20
12.	20AP107/20AP207 EEE,ECE/CSE	Applied Physics Lab	20
13.	2024108/2024208 CE,EEE,ECE/ME,CSE	Communicative English Lab	10
Average % change in curriculum			520/13 = 40




## Percentage change in R20UG compared to R18UG (A.Y.2020-21)




### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Rama
2.	Sri. N. Bhaskara Reddy	Assistant Professor	N. Bhaskara
3.	Dr. G Ashok Reddy	Associate Professor	G. Ashok
4.	Smt. M. Mary Jasmine	Assistant Professor	M. Mary
5.	Sri. Y. Ramana Reddy	Assistant Professor	Y. Ramana

  
HOD

**Dr. I. SREEVANI** M.Sc., Ph.D  
Head of Humanities & Sciences  
K.S.R.M. College of Engineering  
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Dean  
(Academics)





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## Department of Humanities & Sciences

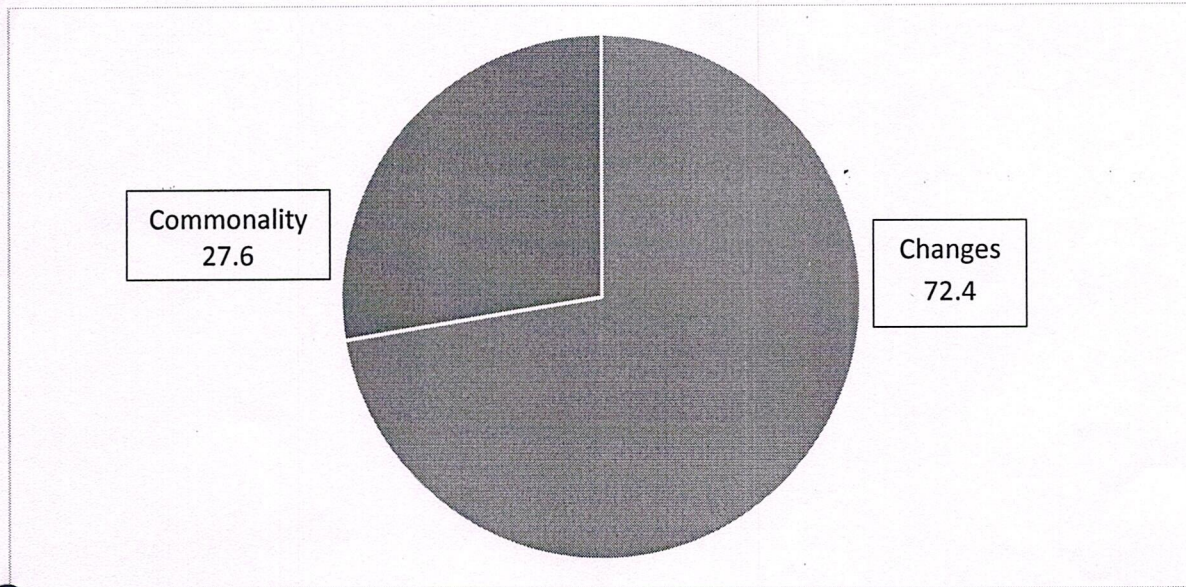
### Programme: B. Tech

#### Syllabus comparison between R18UG and R15UG (AY.2020-21)

S.No	Course Title	Course/Subject code	Percentage of change in R20UG compared to R18UG
<b>Semester: V&amp;VI</b>			
1	Advanced English and Communication Skills Lab	1824512	30
2	Managerial Economics	1825505	42
3	Human values and Professional Ethics	18995M1	60
4	Management Science	1824601/1825609	47
5	Organizational Behaviour	1825616/1899601	45
6	Advanced Numerical Methods	180E2601	100
7	Engineering Materials	180E2602	100
8	Basics of Nanotechnology	180E2603	100
9	Write it right	180E2604	100
10	Human Capital Management	180E2605	100
Average % change in curriculum			724/10 = 72.4

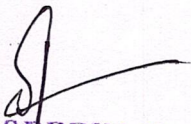


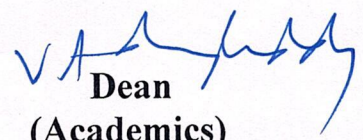
### Percentage change in R18UG compared to R15UG (A.Y.2020-21)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Rama
2.	Sri. N. Bhaskara Reddy	Assistant Professor	Bhaskara Reddy
3.	Dr. G. Ashok Reddy	Associate Professor	Ashok Reddy
4.	Smt. M. Mary Jasmine	Assistant Professor	Mary Jasmine
5.	Sri. Y. Ramana Reddy	Assistant Professor	Y. Ramana Reddy

  
**Dr. I. ESHWARI** M.Sc., Ph.D  
HOD  
Head of Humanities & Sciences  
K.S.R.M. College of Engineering  
KADAPA - 516 005

  
**Dean**  
(Academics)



# **K.S.R.M COLLEGE OF ENGINEERING**

**(AUTONOMOUS)**

## **INDEX**

### **SYLLABUS COMPARISION**

**A.Y 2019-20**

<b>S.NO</b>	<b>PROGRAMME NAME</b>
<b>1</b>	<b>Department of Civil Engineering</b>
<b>2</b>	<b>Department of Electrical &amp; Electronics Engineering</b>
<b>3</b>	<b>Department of Mechanical Engineering</b>
<b>4</b>	<b>Department of Electronics and Communication Engineering</b>
<b>5</b>	<b>Department of Computer Science Engineering</b>
<b>6</b>	<b>Department of Humanities and Sciences</b>





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An ISO 14001:2004 & 9001: 2015 Certified Institution

Department of Civil Engineering

## Syllabus comparison between R18UG and R15UG

Programme: B. Tech.

Branch: Civil Engineering

Semester: III and IV

Sl. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
1	1801304	Engineering Mechanics	0
2	1801305	Surveying and Geomatics	30
3	1801306	Building Materials and Construction	40
4	1801307	Computer Aided Civil Engineering Drawing Lab	0
5	1801308	Surveying and Geomatics Lab	40
6	1801309	Civil Engineering Workshop	100
7	1801403	Engineering Geology	30
8	1801404	Fluid Mechanics	25
9	1801405	Solid Mechanics – 1	0
10	1801406	Disaster Preparedness & Planning Management	100
11	1801407	Engineering Geology Lab	0
12	1801408	Fluid Mechanics Lab	0
13	1801409	Solid Mechanics Lab	0
Average Percentage change in Curriculum			28





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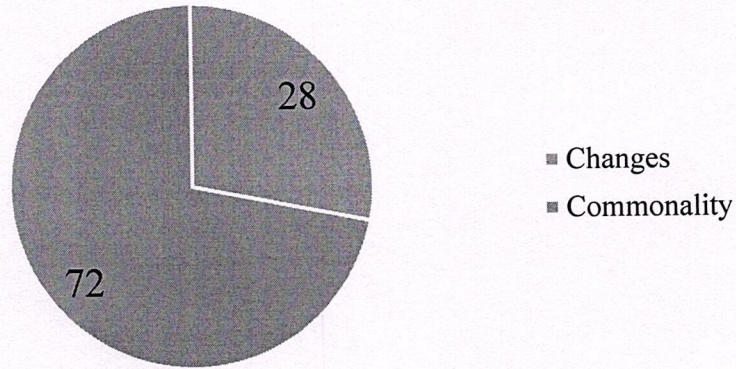
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% change in R18UG compared to R15UG



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Sreenivasa Reddy	Professor	
2.	Dr. V. Giridhar	Professor	
3.	Dr. T. Kiran Kumar	Professor	

HoD

Head

Department of Civil Engineering  
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Department of Electrical and Electronics Engineering

Syllabus comparison between R18UG and R15UG (AY 2019-20)

Programme: B. Tech.

Semester: III and IV

Sl. No.	Subject code	Subject Title	Percentage change in R18UG compared to R15UG
		<b>III Semester</b>	
1.	1823301	Biology for Engineers	100
2.	1814302	Electronics Devices & Circuits	10
3	1802303	Electrical Circuit Analysis	05
4.	1802304	Electromagnetic Fields	05
5.	1802305	Electrical Machines - I	05
6.	1802306	Power Systems - I	05
7.	1802307	Electrical Circuit Analysis Lab	10
8.	1814308	Electronics Devices & Circuits Lab	10
9.	1824309	Soft Skills Lab	100
		<b>IV Semester</b>	
10	1814402	Digital System Design	15
11	1802403	Electrical Measurements	10
12	1802404	Control Systems	10
13	1802405	Electrical Machines - II	05
14	1802406	Power Systems - II	10
15	1802407	Electrical Measurements Lab	10
16	1802408	Electrical Machines - I Lab	10
17	1805409	Python Programming Lab	100
18.	18994M1	Environmental Science	100
Average Percentage change in Curriculum			28.88





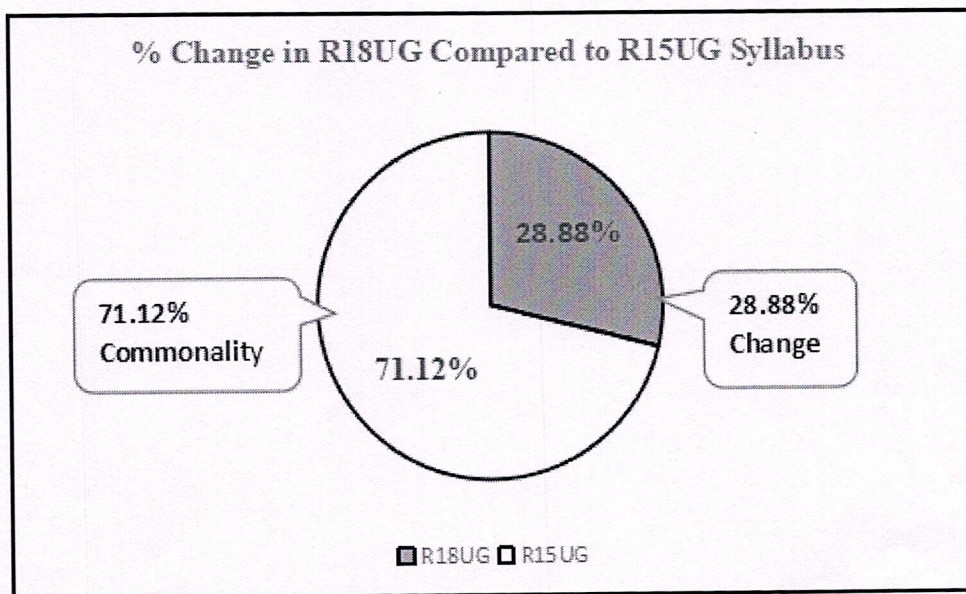
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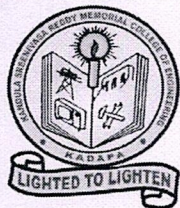
## Internal Evaluation Committee:

S.No.	Name of the Faculty	Designation	Signature
1.	Dr. K. Amaresh	Professor & HoD	<i>Amaresh</i>
2.	Mr.M.Baskar Reddy	Associate Professor	<i>Baskar Reddy</i>
3.	Mr. K.Kalyan Kumar	Assistant Professor	<i>Kalyan Kumar</i>
4.	Mr. P.Durga Prasad	Assistant Professor	<i>P. Durga Prasad</i>

*Amaresh*  
HOD

HEAD  
Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R18UG and R15UG

(A.Y 2019-2020)

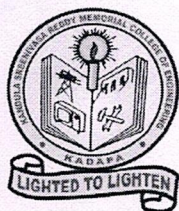
Programme: B. Tech.

Branch: Mechanical Engineering

Semester: III and IV

Sl. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
1	1803303	Engineering Mechanics	100
2	1803304	Manufacturing Process	100
3	1803305	Strength of materials	20
4	1803306	Material science and engineering	20
5	1803307	Thermodynamics	10
6	1803308	Material Science, Mechanics of solids Lab	10
7	1803309	Manufacturing technology Lab	10
8	1803401	Applied Thermo Dynamics	25
9	1803402	Fluid Mechanics & Fluid Machinery	20
10	1803403	Kinematics of Machinery	10
11	1803405	Instrumentation and control systems	10
12	1803406	Computer Aided Machine Drawing	100
13	1803407	Basic Electronics & MOF Lab	30
14	1803408	Seminar/Industrial Training	0
Average Percentage change in Curriculum			33.21





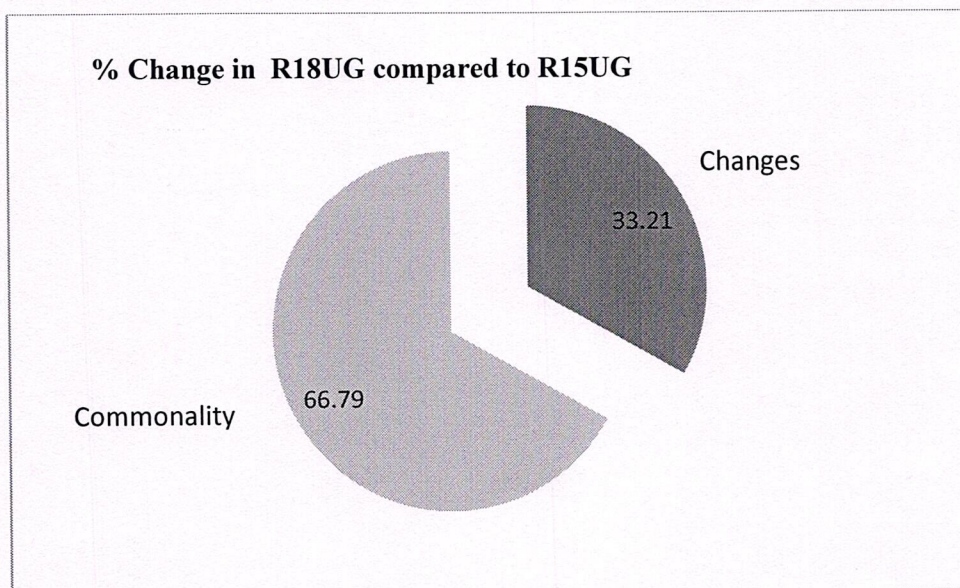
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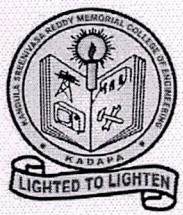
## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. D. Ravi Kanth	Professor	
2.	K.Suresh kumar	Associate Professor	
3.	R. Rama Krishna Reddy	Associate Professor	

HoD

Professor & Head  
Department of Mechanical Engineering  
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## Syllabus comparison between R15UG and R18UG

Programme: B. Tech

Branch: Electronics and Communication Engineering

Semesters : III and IV

	Course code	Course Title	Percentage change in R15UG compared to R18UG
1	1804303	Electronic Devices and Circuits	50
2	1804305	Signals And Systems	10
3	1804306	Network Theory	20
4	1805307	Python Programming	100
5	1804308	Electronic Devices and Circuits Lab	10
6	1804403	Analog and Digital Circuits	30
7	1804406	Electromagnetic Theory and Transmission lines	40
8	1804407	LABVIEW Programming Lab	100
9	1804408	Analog and Digital Circuits Lab	20
Average Percentage change in Curriculum			28%





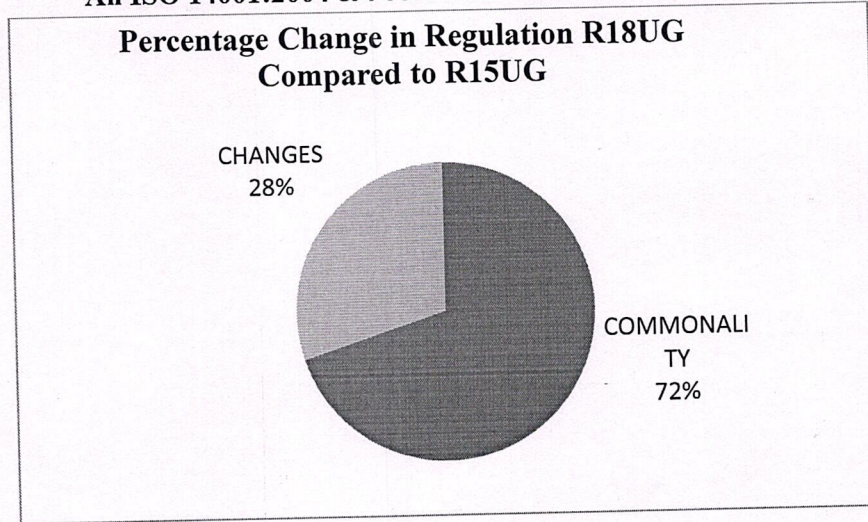
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## Percentage Change in Regulation R18UG Compared to R15UG



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	
2.	Dr. M. V. Narayana	Professor	
3.	Sri R. V. Sreehari	Assoc. Professor	
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	

HoD  
Professor & H.O.D.  
Department of E.C.E.  
K.S.R.M. College of Engineering  
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## Syllabus Comparison between R18UG and R15UG for, AY 2019-2020

Programme: B.Tech

Branch: Computer Science& Engineering

Semester: III and IV

S.No	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1	1805303	Data Structures	20
2	1805304	Discrete Mathematics	20
3	1805305	Digital Logic Design	12
4	1805306	Python Programming	100
5	1805309	Data Structures Lab	10
6	1805310	Python Programming Lab	100
7	1805403	Computer Organization	20
8	1805404	Operating Systems	0
9	1805405	Design and Analysis of Algorithms	10
10	1805406	Java Programming	10
11	1805407	Formal Languages and Automata Theory	0
12	1805408	Java Programming lab	5
13	1805410	Operating Systems Lab	100
Average Percentage Changes in Curriculum (%)			31.3





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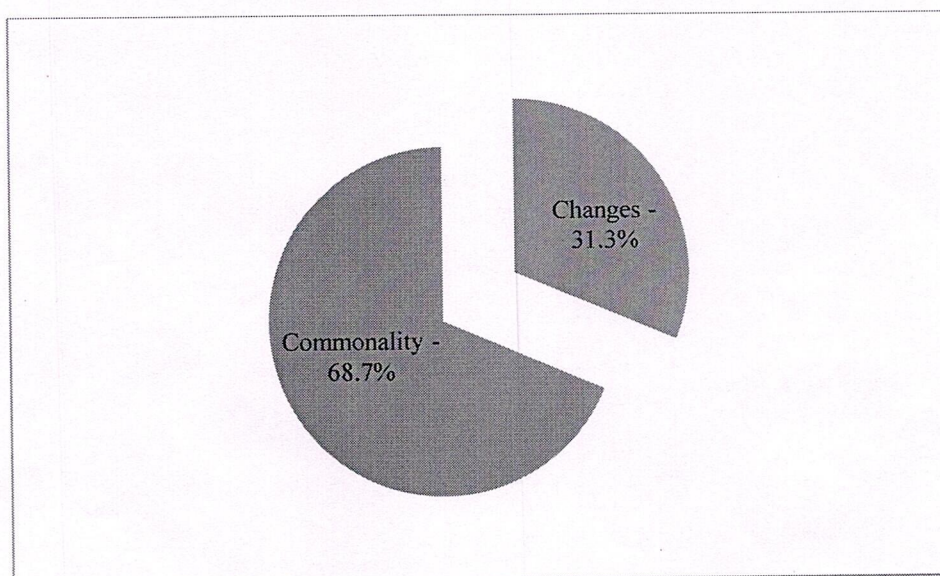
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## Percentage change in R18UG Syllabus Compared to R15UG Syllabus

### B.Tech III Semester & IV Semester



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Smt. B. Manorama Devi	Assistant Professor	

HoD/CSE

Dr. M. Sreenivasulu,

M E, Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

KADAPA - 516 003

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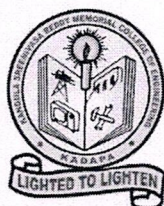
**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**

**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Tech CSE (I Sem - VIII Sem) (R18 Regulations)**

**(Effective from 2018-19 for Regular students and from 2019-20 for  
Later Entry students)**



**KANDULA SREENIVASA REDDY MEMORIAL COLLEGE OF  
ENGINEERING(AUTONOMOUS)**

**KADAPA - 516005, AP**

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## COMPUTER SCIENCE AND ENGINEERING

### I Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – I	3	1	0	30	70	4
1822104	BSC	Engineering Physics	3	1	0	30	70	4
1802103	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803107	ESC	Engineering Graphics & Design	1	0	4	50	50	3
1822108	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802109	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803110	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
TOTAL			11	3	13	290	410	20.5

### II Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – II	3	1	0	30	70	4
1823202	BSC	Engineering Chemistry	3	1	0	30	70	4
1824203	HSMC	English	2	0	0	30	70	2
1805204	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823207	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805208	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824209	HSMC	English Lab	0	0	2	50	50	1
TOTAL			11	2	9	270	430	17.5



**Dr. M. Sreenivasulu,**

M E, Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

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### III Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
18993M1	MC	Environmental Science (Mandatory Course-1)	2	0	0	30	--	0
1804302	PN	Basics of Electronics Engineering	3	0	0	30	70	3
1805303	PCC	Data Structures	3	0	0	30	70	3
1805304	PCC	Discrete Mathematics	3	0	0	30	70	3
1805305	PCC	Digital Logic Design	3	0	0	30	70	3
1805306	PCC	Python Programming	3	0	0	30	70	3
1825307	HSMC	Managerial Economics and Financial Accounting	3	0	0	30	70	3
1814311	PN	Basics of Electronics Engineering Lab	0	0	2	50	50	1
1805309	PCC	Data Structures Lab	0	0	3	50	50	1.5
1805310	PCC	Python Programming Lab	0	0	3	50	50	1.5
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>8</b>	<b>360</b>	<b>570</b>	<b>22</b>

### IV SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1823401	BSC	Biology for Engineers	2	0	0	30	70	2
1821402	BSC	Probability & Statistics	3	0	0	30	70	3
1805403	PCC	Computer Organization	3	0	0	30	70	3
1805404	PCC	Operating Systems	3	0	0	30	70	3
1805405	PCC	Design and Analysis of Algorithms	3	0	0	30	70	3
1805406	PCC	Java Programming	3	0	0	30	70	3
1805407	PCC	Formal Languages and Automata Theory	3	0	0	30	70	3
1805408	PCC	Java Programming lab	0	0	2	50	50	1
1805410	PCC	Operating Systems Lab	0	0	2	50	50	1
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>4</b>	<b>310</b>	<b>590</b>	<b>22</b>



**Dr. M. Sreenivasulu,**

M E, Ph. D.

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### V SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805501	PCC	Web Technologies	2	0	0	30	70	2
1805502	PCC	Data Base Management Systems	3	0	0	30	70	3
1805503	PCC	Computer Networks	3	0	0	30	70	3
1805504	PCC	Software Engineering	3	0	0	30	70	3
1805505	PEC	<b>Professional Elective-1</b>	3	0	0	30	70	3
1805506		1. Human Computer Interaction						
1805507		2. Multimedia Systems						
1805508	PCC	3. Distributed Systems	3	0	0	30	70	3
1805509	PCC	Compiler Design	3	0	0	30	70	3
1825509	PCC	Constitution of India	2	-	-	30	--	0
1805510	PCC	Databases Lab	0	0	2	50	50	1
1805511	PCC	Web Technologies Lab	0	0	2	50	50	1
1824512	HSC	Advanced English and Communications Skills lab	0	0	2	50	50	1
1805513	Project	Socially Relevant Project	0	0	4	100	--	2
<b>TOTAL</b>			<b>19</b>	<b>0</b>	<b>10</b>	<b>460</b>	<b>570</b>	<b>22</b>

### VI SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805601	PCC	Internet of Things	3	0	0	30	70	3
1805602	PCC	Data Mining	3	0	0	30	70	3
1805603	PEC	<b>Professional Elective-2</b>	3	0	0	30	70	3
1805604		1. Artificial Intelligence						
1805605		2. Software Testing						
1805606	OEC	<b>Open Elective-1</b>	3	0	0	30	70	3
180E501		1. Data Structures						
180E502		2. Database Management Systems						
1825609	HSC	Management Science	3	0	0	30	70	3
1805608	PCC	Mobile Application Development	3	0	0	30	70	3
1805609	PCC	Internet of Things Lab	0	0	2	50	50	1
1805610	PCC	Mobile Application Development Lab	0	0	2	50	50	1
1805611	Project	Internship	--	--	--	100	--	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>04</b>	<b>380</b>	<b>520</b>	<b>22</b>

  
**Dr. M. Sreenivasulu,**

M. E., Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

KADAPA - 516 003



### VII SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805701	PCC	Machine Learning	3	0	0	30	70	3
1805702	PCC	Big Data Technologies	3	0	0	30	70	3
1805703 1805704 1805705	PEC	<b>Professional Elective-3</b> 1. Computer Graphics 2. Design Patterns 3. Cloud Computing	3	0	0	30	70	3
18OE503 18OE504	OEC	<b>Open Elective-2</b> 1. Python Programming 2. Computer Networks	3	0	0	30	70	3
18OE505 18OE506	OEC	<b>Open Elective-3</b> 1. Web Technologies 2. Operating Systems	3	0	0	30	70	3
1805710	PCC	Big Data Technologies Lab	0	0	2	50	50	1
1805711	PCC	Machine Learning Lab	0	0	2	50	50	1
1805712	Project	Technical Seminar	0	0	2	100	--	1
1805713	Project	Project-I	0	0	8	100	--	4
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>450</b>	<b>450</b>	<b>22</b>

### VIII SEMESTER

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1805801 1805802 1805803	PEC	<b>Professional Elective-4</b> 1. Cyber Security 2. Object Oriented Analysis & Design 3. Deep Learning	3	0	0	30	70	3
18OE507 18OE508	OEC	<b>Open Elective-4</b> 1. Software Engineering 2. Cloud Computing	3	0	0	30	70	3
1805806	Project	Project-II	0	0	12	50	50	6
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>12</b>	<b>110</b>	<b>190</b>	<b>12</b>



Dr. M. Sreenivasulu,

M E, Ph. D.

Professor & HOD CSE

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## Department of Humanities & Sciences

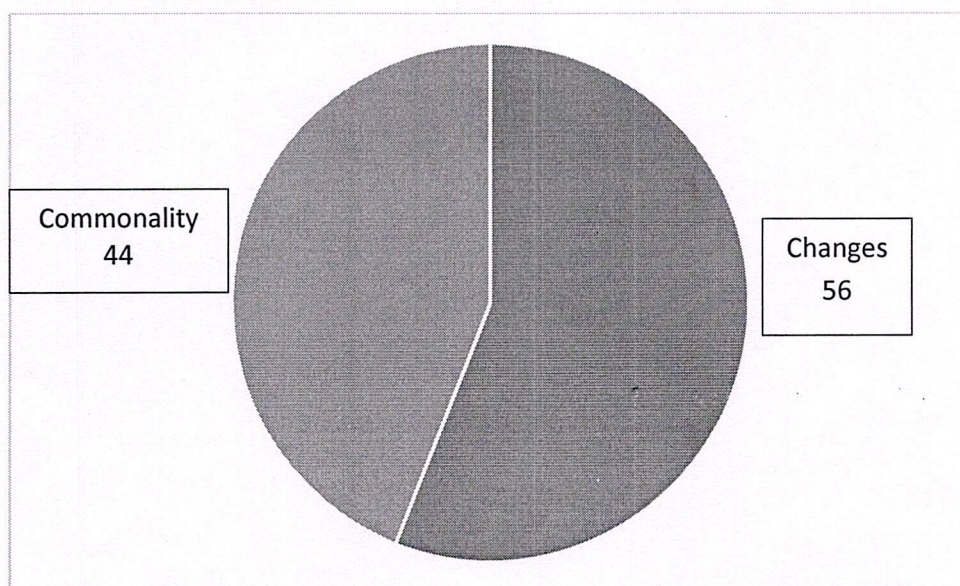
### Programme: B. Tech

#### Syllabus comparison between R18UG and R15UG (A.Y.2019-20)

S.no	Course Title	Course/Subject code	Percentage of change in R18UG compared to R15UG
<b>Semester: III &amp; IV</b>			
1.	Numerical Methods and Probability & Statistics	1821302	50
2.	Managerial Economics & Financial Analysis	1824302/1825401	45
3.	Mathematics-III	1821301/1821401	40
4.	Environmental Science	18993M1	30
5.	Managerial Economics and Financial Accounting	1825307	45
6.	Soft Skill Lab	1824309	100
7	Biology for Engineers	1823301/1823401	100
8	Probability & Statistics	1821402	40
9	Effective Technical Communication	1824402	100
10	Advanced English Communication Lab	1824409	10
	Average % change in curriculum		560/10 = 56

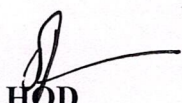


## Percentage change in R18UG compared to R15UG (A.Y.2019-20)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Rama
2.	Sri. N. Bhaskara Reddy	Assistant Professor	N. Reddy
3.	Smt. M. Mary Jasmine	Assistant Professor	M. Jasmine
4.	Sri.G.C.Venkata Subbaiah	Assistant Professor	G.C. Subbaiah

  
**HOD**  
**Dr. I. SREEVANI M.Sc., Ph.D**  
 Head of Humanities & Sciences  
 K.S.R.M. College of Engineering  
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# **K.S.R.M COLLEGE OF ENGINEERING**

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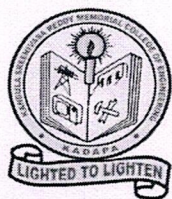
## **INDEX**

### **SYLLABUS COMPARISION**

**A.Y 2018-19**

<b>S.NO</b>	<b>PROGRAMME NAME</b>
<b>1</b>	<b>Department of Civil Engineering</b>
<b>2</b>	<b>Department of Electrical &amp; Electronics Engineering</b>
<b>3</b>	<b>Department of Mechanical Engineering</b>
<b>4</b>	<b>Department of Electronics and Communication Engineering</b>
<b>5</b>	<b>Department of Computer Science Engineering</b>
<b>6</b>	<b>Department of Humanities and Sciences</b>





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## Department of Civil Engineering

### Syllabus comparison between R15UG and R14UG

Programme: B. Tech.

Branch: Civil Engineering

Semester: VII and VIII

Sl. No.	Course code	Course Title	Percentage change in R15UG compared to R14UG
1	1501701	Structural Analysis – 2	50
2	1501702	Design & Detailing of Reinforced Concrete Structures – 2	15
3	1501703	Design & Detailing of Steel Structures	20
4	1501704	Transportation Engineering - 2	100
5	1501705	Water Resources Engineering – 2	100
6	1501706	Pre-stressed Concrete	50
7	1501707	Advanced Foundation Engineering	100
8	1501708	Construction Planning & Management	0
9	1501709	Concrete & Highway Materials Laboratory	0
10	1501710	CADD Lab	100
11	1501801	Sanitary Engineering	25
12	1501802	Design & Drawing of Irrigation Structures	0
13	1501803	Quantity Surveying and Valuation	0
14	1501804	Finite Element Method	80
15	1501805	Environmental Impact Assessment	100
16	1501806	Bridge Engineering	0
Average Percentage change in Curriculum			46





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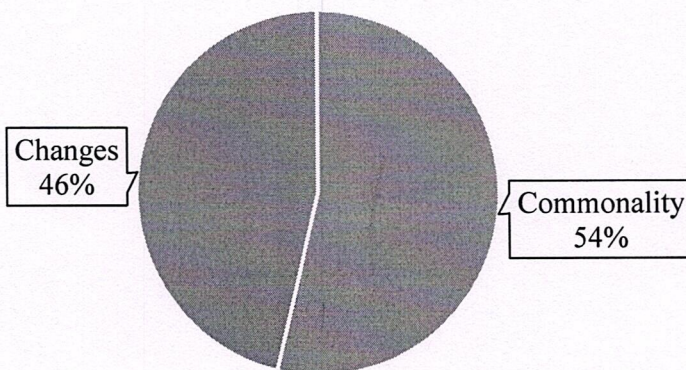
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% change in R15UG compared to R14UG



## Internal Evaluation Committee:

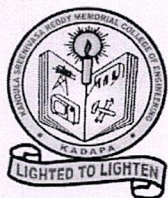
S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Sreenivasa Reddy	Professor	
2.	Dr. V. Giridhar	Professor	
3.	Dr. T. Kiran Kumar	Professor	

HoD

Head

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Department of Civil Engineering

## Syllabus comparison between R18PG and R14PG

Programme: M. Tech.

Specialization: Geotechnical Engineering

Semester: I, II, III and IV

Sl. No.	Course code	Course Title	Percentage change in R18PG compared to R14PG
1	1851101	Advanced Soil Mechanics	100
2	1851102	Advanced Foundation Engineering	100
3	1851103	Soil Structure Interaction	0
4	1851104	Ground Improvement Techniques	0
5	1851105	Pavement Analysis and Design	0
6	1851106	FEM in Geo-Mechanics	0
7	1851107	Environmental Geo-Technology	0
8	1851108	Critical Soil Mechanics	100
9	1851109	Research Methodology & IPR	100
10	1851110	Soil Mechanics – 1 Laboratory	50
11	1851111	Soil Mechanics – 2 Laboratory	50
12	1851201	Dynamics of Soil and Foundations	0
13	1851202	Subsurface Investigations and Instrumentation	0
14	1851203	Offshore Geo-Technical Engineering	100
15	1851204	Computational Geo-Mechanics	100
16	1851205	Engineering Rock Mechanics	100
17	1851206	Earth Retaining Structures	0
18	1851207	Design of Underground Excavations	100





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19	1851208	Physical and Constitutive Modeling on Geo-Mechanics	100
20	1851209	Mini-Project	100
21	1851210	Sub Soil Exploration Laboratory	100
22	1851211	Geo-Technical Engineering Modeling Laboratory	0
23	1851301	Stability Analysis of Slopes	100
24	1851302	Foundation on Weak Rocks	100
25	1851303	Geo-Technical Earthquake Engineering	0
26	1851304	Business Analytics	100
27	1851305	Industrial Safety	100
28	1851306	Operations Research	100
29	1851307	Cost Management of Engineering Projects	100
30	1851308	Composite Materials	100
31	1851309	Waste to Energy	100
32	1870A01	English for Research Paper Writing	100
33	1870A02	Disaster Management	100
34	1870A03	Sanskrit for Technical Knowledge	100
35	1870A04	Value Education	100
36	1870A05	Constitution of India	100
37	1870A06	Pedagogy Studies	100
38	1870A07	Stress Management by Yoga	100
39	1870A08	Personality Development through Life Enlightenment Skills	100
40	1851310	Dissertation Stage – 1	0





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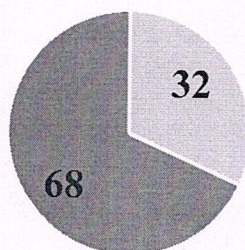
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41	1851401	Dissertation Final Stage	0
Average Percentage change in Curriculum			68

## % change in R18PG compared to R14PG



■ Commonality ■ Changes

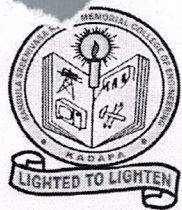
### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Sreenivasa Reddy	Professor	
2.	Sri. Suresh Praveen Kumar	Assistant Professor	
3.	Sri. P. Rajendra Kumar	Assistant Professor	

HoD

Head  
Department of Civil Engineering  
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## Department of Electrical and Electronics Engineering

### Syllabus comparison between R15UG and R14UG (AY 2018-19)

Programme: B. Tech.

Semester: VII and VIII

Sl. No.	Course code	Course Title	Percentage change in R15 compared to R14
<b>VII Semester</b>			
1.	1502702	Advanced Control Systems	00
2.	1502703	HVDC Transmission	00
3.	1502704	Switchgear & Protection	05
4.	1502705	Electrical Distribution Systems	05
5.	1502706	High Voltage Engineering	100
6.	1502707	Power Quality	100
7.	150270	Switch Mode Power Converters	100
8.	151470	Micro Processors & Micro Controllers Lab	00
9.	1502710	Power Systems Simulation Lab	00
<b>VIII Semester</b>			
10.	1502801	Utilization of Electrical Power	00
11.	1502802	FACTS	00
12.	1502804	Special Electrical Machines	100
13.	1502805	Energy Auditing and Demand side Management	100
14.	1502806	Reliability Engineering & Applications to Power Systems	100
<b>Average Percentage change in Curriculum</b>			<b>43.57</b>





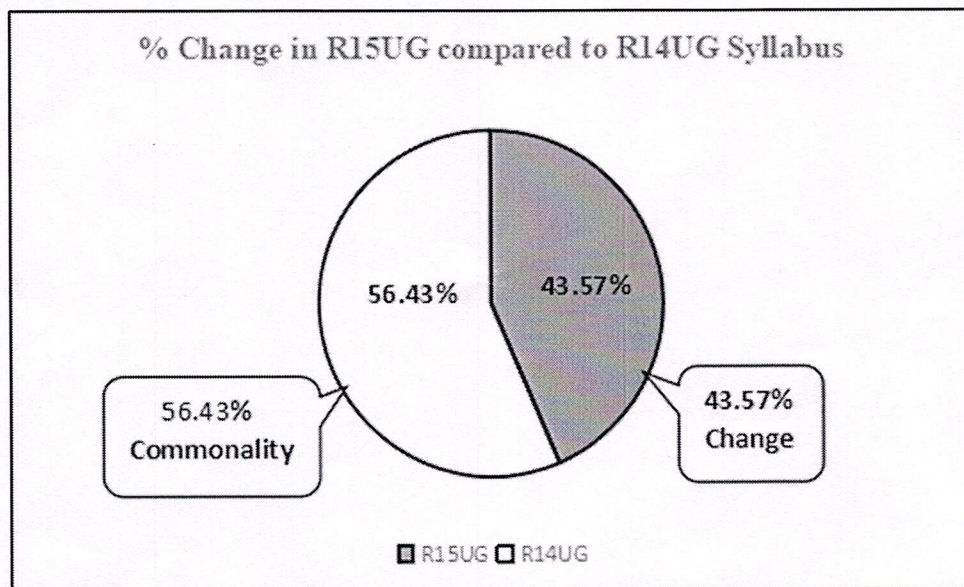
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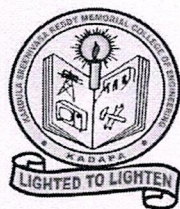
## Internal Evaluation Committee:

S.No.	Name of the Faculty	Designation	Signature
1.	Mrs.C.N. Arpitha	Professor & HoD	<i>[Signature]</i>
2.	Mr.M.Baskar Reddy	Associate Professor	<i>[Signature]</i>
3.	Mr. K. Kalyan Kumar	Assistant Professor	<i>[Signature]</i>
4.	Mr.T.Kishore Kumar	Assistant Professor	<i>[Signature]</i>

*[Signature]*  
HoD

HEAD  
Department of Electrical &  
Electronics Engineering  
K.S.R.M. College of Engineering  
Guddapah - 516 003





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## Department of Electrical and Electronics Engineering

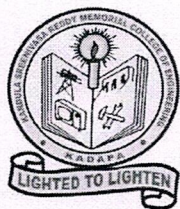
### Syllabus comparison between R18PG and R14PG (AY 2018-19)

Programme: M. Tech.

Specialization: Power Systems

Sl. No.	Course code	Course Title	Percentage change in R18PG compared to R14PG
<b>I Semester</b>			
1.	1852101	Power System Analysis	100
2.	1852102	Power System Dynamics-I	05
3.	1852104	Smart Grids	02
4.	1852105	Wind and Solar Systems	100
5.	1852106	Electrical Power Distribution System	100
6.	1852107	Mathematical Methods for Power Engineering	100
7.	1852108	Electric and Hybrid Vehicles	100
8.	1800109	Research Methodology and IPR	100
9.	1852110	Power System Lab - I	100
10.	1852111	Power System Simulation Lab-I	100
<b>II Semester</b>			
11.	1852201	Digital Protection of Power Systems	5
12.	1852202	Power System Dynamics -II	5
13.	1852203	Restructured Power Systems	100
14.	1852204	Energy Auditing and Management	100
15.	1852205	Power Apparatus Design	100
16.	1852206	SCADA System and Applications	100
17.	1852209	Mini Project with Seminar	100
18.	1852210	Power System Lab -II	100
19.	1852211	Power Systems Simulation Lab -II	100





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20.	1870A05	Constitution of India (Audit Course II)	100
<b>Audit courses I &amp; II</b>			
21.	1870A01	English for Research Paper Writing	100
22.	1870A02	Disaster Management	100
23.	1870A03	Sanskrit for Technical Knowledge	100
24.	1870A04	Value Education	100
25.	1870A05	Constitution of India	100
26.	1870A06	Pedagogy Studies	100
27.	1870A07	Stress Management by Yoga	100
28.	1870A08	Personality Development through Life Enlightenment Skills	100
<b>III Semester</b>			
29.	1852301	Power System Transients	100
30.	1852302	Industrial Load Modeling and Control	100
31.	1852303	Dynamics Of Linear Systems	100
32.	1871304	Business Analytic	100
33.	1871305	Industrial Safety	100
34.	1871306	Operations Research	100
35.	1871307	Cost Management of Engineering Projects	100
36.	1871308	Composite Materials	100
37.	1871309	Waste to Energy	100
<b>Average Percentage change in Curriculum</b>			<b>89.64</b>





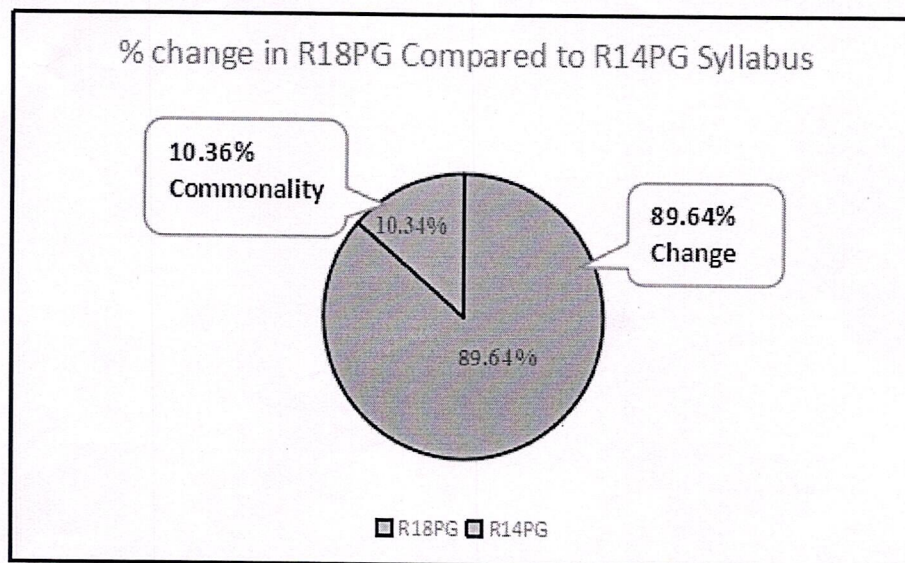
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## Internal Evaluation Committee:

S.No.	Name of the Faculty	Designation	Signature
1.	Dr. K.Amaresh	Professor & HOD	<i>Amaresh</i>
2.	Mr.M.Basker Reddy	Associate Professor	<i>Basker Reddy</i>
3.	Mr. K. Rama Mohan Reddy	Associate Professor	<i>Ram Mohan Reddy</i>
4.	Mr. K.Kalyan Kumar	Assistant Professor	<i>Kalyan</i>

*Amaresh*  
HOD

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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R18UG and R15UG

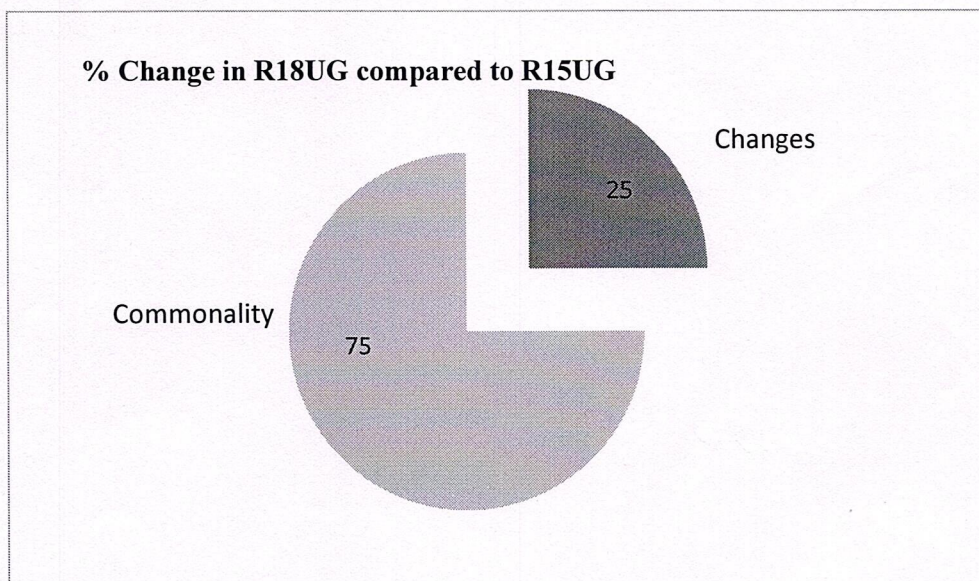
(A.Y 2018-2019)

Programme: B. Tech.

Branch: Mechanical Engineering

Semester: II

Sl. No.	Course code	Course Title	Percentage change in R18UG compared to R15UG
1	1803207	Engineering Graphics and design	40
2	1803211	Workshop and Manufacturing Practices	10
Average Percentage change in Curriculum			25

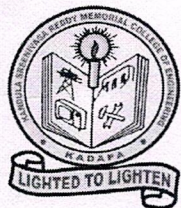


#### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. D. Ravikanth	Professor	
2.	K. Suresh Kumar	Associate Professor	
3.	R. Rama Krishna Reddy	Associate Professor	

HoD  
Professor & head  
Department of Mechanical Engineering  
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## DEPARTMENT OF MECHANICAL ENGINEERING

### Syllabus Comparison between R15UG and R14UG

(A.Y 2018-2019)

Programme: B. Tech.

Branch: Mechanical Engineering

Semester: VII and VIII

Sl. No.	Course Code	Course Title	Percentage change in R15UG compared to R14UG
1	1503701	CAD/CAM	0
2	1503702	Metrology	30
3	1503703	Finite Element Methods	20
4	1503704	Instrumentation & Control Systems	20
5	1503705	Production & Operations Management	0
6	1503706	Computational Fluid dynamics	10
7	1503707	Mechatronics	10
8	1503708	Modern Manufacturing Methods	10
9	1503709	Tool Design	10
10	1503710	Rapid Prototyping	100
11	1503711	Instrumentation and control systems lab	10
12	1503712	CAD/CAM Lab	10
13	1503801	Automation & Robotics	25
14	1503802	Renewable Energy Sources	20
15	1503803	Gas Turbines & Jet Propulsion	10
16	1503804	Geometric Modeling	20
17	1503805	Reliability in Engineering Systems	100
18	1503806	Industrial safety & Management	100
19	1503807	Seminar	0





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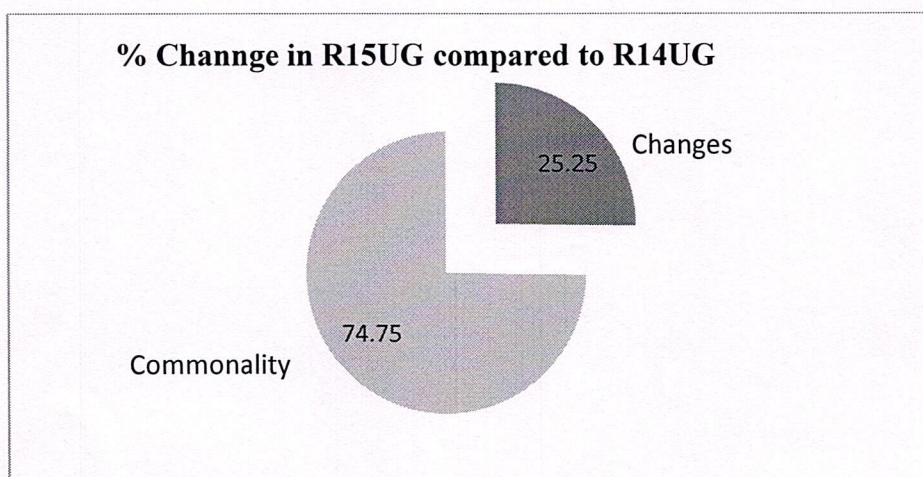
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20	1503808	Project Work	0
Average Percentage change in Curriculum			25.25



## Internal Evaluation Committee:

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1.	Dr. D. Ravikanth	Professor	
2.	K. Suresh Kumar	Associate Professor	
3.	R. Rama Krishna Reddy	Associate Professor	

HoD

Professor & head  
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## Department of Mechanical Engineering

### Syllabus comparison between R18PG and R14PG

(AY 2018-2019)

Program: M. Tech.

Specialization: CAD/CAM

Semester: I , II,III & IV

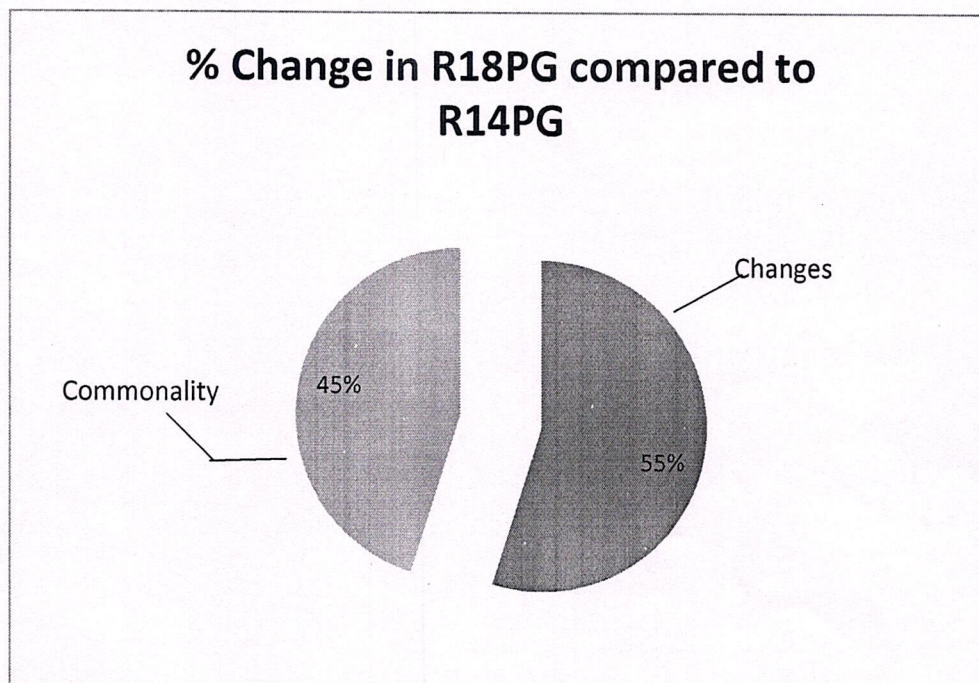
Sl. No.	Course code	Course Title	Percentage change in R18PG compared to R14PG
1	1853101	Geometric Modeling	0
2	1853102	Computer Integrated Manufacturing	0
3	1853103	Computer Aided Process Planning	0
4	1853104	Concurrent Engineering	0
5	1853105	Quality Engineering & Manufacturing	0
6	1853106	Advanced optimization techniques	0
7	1853107	Design For Manufacturing	0
8	1853108	Mechatronics	0
9	1800109	Research Methodology & IPR	100
10	1853110	Computer graphics Lab	100
11	1853111	CAD Lab	50
12	1853201	Finite Element Methods	0
13	1853202	Robotics	0
14	1853203	Advances in Manufacturing Technology	0
15	1853204	Artificial Intelligence & Expert Systems	0



16	1853205	Advances Stress Analysis	100
17	1853206	Flexible Manufacturing Systems	100
18	1853207	Computer Graphics	0
19	1853208	CNC Technology and Programming	0
20	1853209	Mini-project with seminar	50
21	1853210	CAE Lab	100
22	1853211	CAM Lab	50
23	1870A01	English for Research paper writing	100
24	1870A02	Disaster Management	100
25	1870A03	Sanskrit for Technical Knowledge	100
26	1870A04	Value Education	100
27	1870A05	Constitution of India	100
28	1870A06	Pedagogy Studies	100
29	1870A07	Stress Management by Yoga	100
30	1870A08	Personality Development through Life Enlightenment skills	100
31	1853301	Rapid Prototyping	0
32	1853302	Automation in Manufacturing	0
33	1853303	Advanced Tool Design	100
34	1871304	Business Analytics	100
35	1871305	Industrial Safety	100
36	1871306	Operations Research	0
37	1871307	Cost Management of Engineering Projects	100
38	1871308	Composite Materials	100
39	1871309	Waste to Energy	100
40	1853310	Dissertation Phase-I	100
41	1853401	Dissertation Phase-II	100



41	1853401	Dissertation Phase-II	100
Average Percentage change in Curriculum			55



**Internal Evaluation Committee:**

S.No	Name of the Faculty	Designation	Signature
1.	Dr. D. Ravikanth	Professor	
2.	K. Suresh Kumar	Associate Professor	
3.	Dr. P. Sreenivas	Associate Professor	

**HoD**  
**Professor & head**  
**Department of Mechanical Engineering**  
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Department of Electronics and Communication Engineering

## Syllabus comparison between R15UG and R14UG

Programme: B. Tech

Branch: Electronics and Communication Engineering

Semester : VII and VIII

S.No	Course code	Course Title	Percentage change in R15UG compared to R14UG
1	1504702	VLSI Design	0
2	1504703	Electronic Measurements and Instrumentation	20
3	1504704	Optical communications	20
4	1504705	Digital Image Processing	10
		<b>Elective-II</b>	0
5	1504706	Embedded Real Time Operating Systems	0
6	1504707	Neural networks and Fuzzy Logic	0
7	1504708	Data Communications	0
8	1504709	Microwave & Optical Communications Lab	0
9	1504710	VLSI Lab	100
10	1504801	Cellular & Mobile Communications	0
11	1504802	Satellite Communications	0
		<b>Elective -III</b>	0
12	1504803	RADAR Systems	0
13	1504804	Speech Processing	0
		<b>Elective-IV</b>	
14	1504806	Data Acquisition Systems	0
15	1504807	Spread Spectrum Communications	0





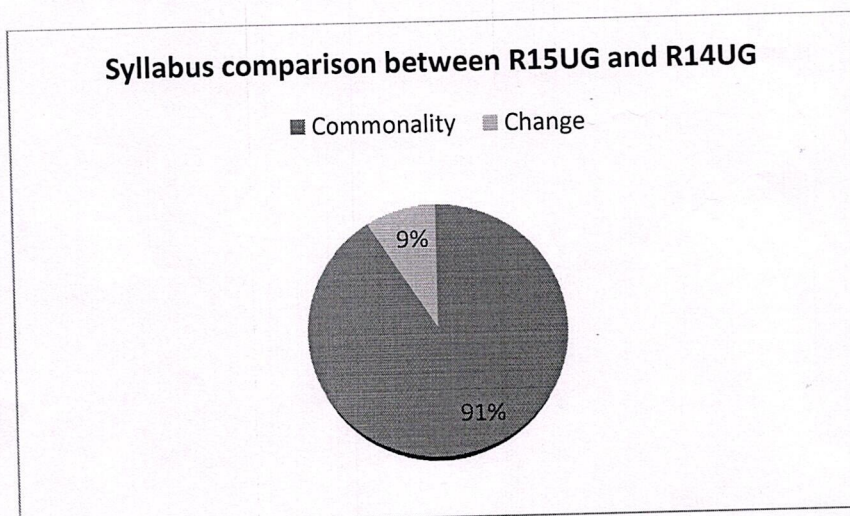
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16	1504808	Biomedical Instrumentation	10
17	1504809	Seminar	0
18	1504810	Project	0
Average Percentage change in Curriculum			9%



Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	<i>G. Hemalatha</i>
2.	Dr. M. V. Narayana	Professor	<i>M. V. Narayana</i>
3.	Sri R. V. Sreehari	Assoc. Professor	<i>S. R. V. Sreehari</i>
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	<i>S. L. Prathapa Reddy</i>

*G. Hemalatha*  
**HoD**  
Professor & H.O.D.  
Department of E.C.E.  
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Department of Electronics and Communication Engineering

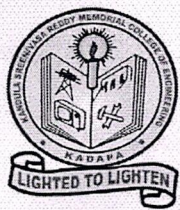
## Syllabus comparison between R18PG and R14PG

Programme: M. Tech

Specialization: Digital Electronics and Communication Systems

	Course code	Course Title	Percentage change in R18PG compared to R14PG
1	1854101	Digital System Design	0
2	1854102	Digital Communication Techniques	0
3	1854103	Analog & Digital CMOS VLSI Design	70
4	1854104	Low power VLSI	100
5	1854105	SoC Design	100
6	1854106	Digital Image & Video Processing.	10
7	1854107	Wireless & Mobile Communications	10
8	1854108	Advanced Communication Networks	100
9	1800109	Research Methodology & IPR	100
10	1854110	DSD Lab	0
11	1854111	DCT Lab	20
12	1854201	Microcontrollers & Programmable DSP Processors	80
	1854202	Advanced DSP	0
13	1854203	Advanced Computer Architecture.	0
14	1854204	IOT & Applications	100
15	1854205	VLSI Signal Processing	20
16	1854206	Detection & Estimation Theory	0
17	1854207	Optical Networks	70





# K.S.R.M. COLLEGE OF ENGINEERING

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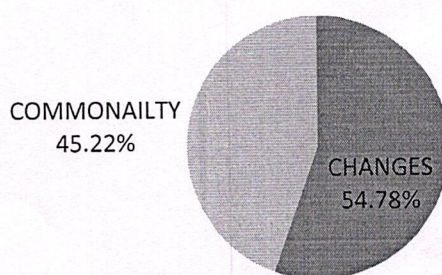
Kadapa, Andhra Pradesh, India- 516 005

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18	1854208	Biomedical Signal Processing	100
19	1854210	Microcontrollers and Programmable DSP Processors Lab	100
20	1854211	Advanced DSP Lab	100
21	1854301	Microcomputer System Design	0
22	1854302	Joint Time Frequency Analysis & MRA	100
23	1854303	Pattern recognition & Machine learning	100
Average Percentage change in Curriculum			54.78%

Syllabus comparison between R18PG and R14PG



## Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1.	Dr. G. Hemalatha	Professor	G. Hemalatha
2.	Dr. M. V. Narayana	Professor	M. V. Narayana
3.	Sri R. V. Sreehari	Assoc. Professor	S. R. V. Sreehari
4.	Dr. S. L. Prathapa Reddy	Assoc. Professor	S. L. Prathapa Reddy

G. Hemalatha

HoD

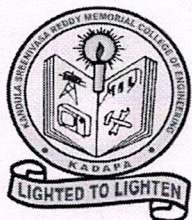
Professor & H.O.D.

Department of E.C.E.

K.S.R.M. College of Engineering

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## Syllabus Comparison between R15UG and R14UG, AY 2018-2019

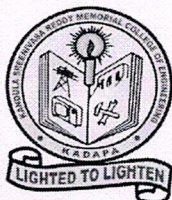
Programme: B.Tech

Branch: Computer Science & Engineering

### R15UG - VII Semester & VIII Semester

S.No	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1	1505701	Big Data Technologies	0
2	1505702	Cloud Computing	100
3	1505703	Artificial Intelligence	0
4	1505704	Software Testing	5
5	1505705	Computer Graphics (CBCC – III)	0
6	1505706	Mobile Computing (CBCC – III)	100
7	1505707	Natural Language Processing (CBCC – III)	100
8	1505708	Internet of Things	100
9	1505709	Software Testing Lab	100
10	1505710	Internet of Things Lab	100
11	1505801	Software Project Management	0
12	1505802	Ethical Hacking	100
13	1505804	Digital Image Processing (CBCC – IV)	0
14	1505805	Social Network Mining and Analysis (CBCC – IV)	100
15	1525806	Soft Computing (CBCC – IV)	0
16	1505807	Technical Seminar	0
17	1505808	Project Work	0
Average Percentage Changes in Curriculum (%)			47.35





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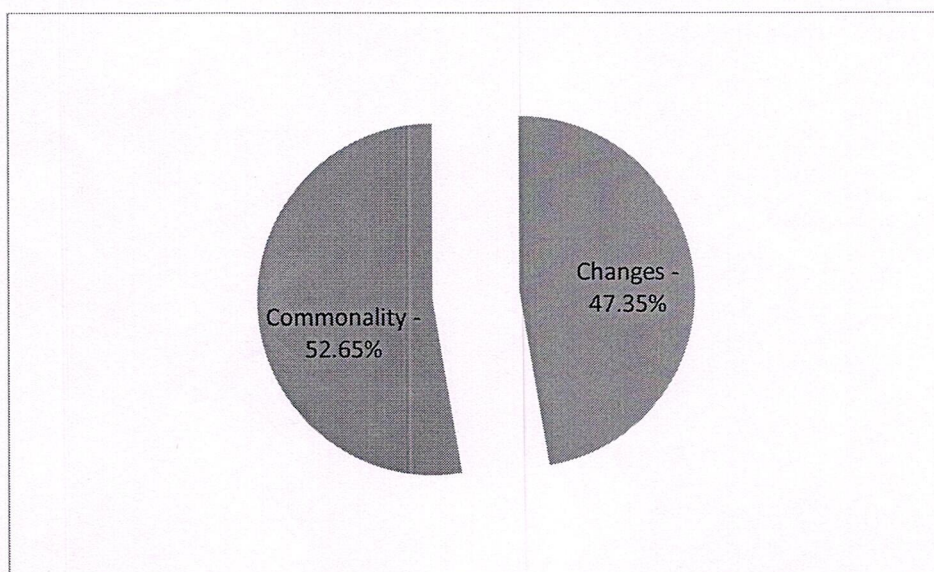
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## Percentage change in R15UG Syllabus Compared to R14UG Syllabus

### B.Tech VII Semester & VIII Semester



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Smt. B. Manorama Devi	Assistant Professor	

HoD/CSE

Dr. M. Sreenivasulu,

M. E , Ph. D.

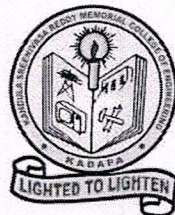
Professor & HOD CSE

K.S.R.M. College of Engineering

KADAPA - 516 003



**Regulations for UG Programs in Engineering (R15UG)**  
**(Effective from 2015-16)**  
**&**  
**Curriculum and Syllabus for I-VIII Semesters**



**Kandula Srinivasa Reddy Memorial College of Engineering**  
**(Autonomous)**  
**Kadapa 516003 AP**

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I Semester

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1521101	BS	Mathematics-1	3	1	0	30	70	3
1521102	BS	Mathematics-2	3	1	0	30	70	3
1503103	ED	Engineering Graphics	1	0	3	30	70	3
1524104	HS	English-1	4	0	0	30	70	3
1505105	ED	Programming in C	3	1	0	30	70	3
1501106	HS	Environmental Studies	4	0	0	30	70	3
1505107	ED	Programming in C Lab	0	0	3	50	50	2
1599108	ED	Engineering Workshop	0	0	3	50	50	2
		Total	18	3	9	280	520	22

II Semester

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1522201	BS	Engineering Physics	3	1	0	30	70	3
1521202	BS	Mathematics-3	3	1	0	30	70	3
1523203	BS	Engineering Chemistry	3	1	0	30	70	3
1524204	HS	English-2	4	0	0	30	70	3
1505205	PJ	Introduction to Data Structures	3	1	3	30	70	3
1525206	HS	Human Values and Professional Ethics	4	0	0	30	70	3
1524207	HS	English Language and Communication Skills Lab	0	0	3	50	50	2
1599208	BS	Physics and Chemistry Lab	0	0	3	50	50	2
		Total	18	3	9	280	520	22



Dr. M. Sreenivasulu,

M. E., Ph. D.

Professor & HOD CSE

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### III SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1599301	Electrical & Electronics Engineering	PN	3	1	0	30	70	3
2.	1505302	Advanced Data Structures	PJ	3	1	0	30	70	3
3.	1505303	Digital Logic Design	PJ	3	1	0	30	70	3
4.	1505304	Discrete Mathematics	PJ	3	1	0	30	70	3
5.	1525305	Managerial Economics & Financial Analysis	PN	3	1	0	30	70	3
6.	1505306	Object Oriented Programming through C++	PJ	3	1	0	30	70	3
7.	1505307	Object Oriented Programming & Data Structures Lab	PJ	0	0	3	50	50	2
8.	1599308	Electrical & Electronics Engineering Lab	PN	0	0	3	50	50	2
		Total:		18	6	6	280	520	22

### IV SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1521401	Probability & Statistics	HS	3	1	0	30	70	3
2.	1505402	Operating Systems	HS	4	0	0	30	70	3
3.	1505403	Database Management Systems	PJ	3	1	0	30	70	3
4.	1505404	Formal Languages & Automata Theory	PJ	3	1	0	30	70	3
5.	1505405	Java Programming	PJ	3	1	0	30	70	3
6.	1505406	Computer Organization	PJ	4	0	0	30	70	3
7.	1525407	Database Management Systems Lab	PJ	0	0	3	50	50	2
8.	1505408	Java Programming Lab	PJ	0	0	3	50	50	2
		Total:		20	4	6	280	520	22



**Dr. M. Sreenivasulu,**

M E, Ph. D.

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### V SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1505501	Web Technologies	PJ	3	1	0	30	70	3
2.	1505502	Computer Networks	PJ	3	1	0	30	70	3
3.	1505503	Software Engineering	PJ	4	0	0	30	70	3
4.	1505504	Compiler Design	PJ	3	1	0	30	70	3
5.		<b>CBCC-I</b>	PJ	3	1	0	30	70	3
	1505505	Advanced Computer Architecture							
	1505506	Multimedia Systems							
	1505507	Principles of Programming Languages							
6.	1504508	Microprocessors	PN	4	0	0	30	70	3
7.	1505509	Web Technologies Lab	PN	0	0	3	50	50	2
8.	1524510	Advanced English & Communication Skills Lab	PN	0	0	3	50	50	2
		Total:		20	4	6	280	520	22

### VI SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1505601	Object Oriented Analysis & Design	PJ	4	0	0	30	70	3
2.	1505602	Design & Analysis of Algorithms	PJ	4	0	0	30	70	3
3.	1505603	Cryptography & Network Security	PJ	4	0	0	30	70	3
4.	1505604	Data Mining	PJ	3	1	0	30	70	3
5.	1505605	Mobile Application Development	PJ	3	1	0	30	70	3
6.		<b>CBCC-II</b>	PJ	4	0	0	30	70	3
	1505606	Machine Learning							
	1505607	Distributed Systems							
	1505608	Unix & Shell Programming							
7.	1505609	UML & Data Mining Lab	PN	0	0	3	50	50	2
8.	1505610	Mobile Application Development Lab	PN	0	0	3	50	50	2
		Total:		22	2	6	280	520	22



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### VII SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1505701	Big Data Technologies	PJ	3	1	0	30	70	3
2.	1505702	Cloud Computing	PJ	4	0	0	30	70	3
3.	1505703	Artificial Intelligence	PJ	4	0	0	30	70	3
4.	1505704	Software Testing	PJ	4	0	0	30	70	3
5.	1505705 1505706 1505707	CBCC-III i. Computer Graphics ii. Mobile Computing iii. Natural Language Processing	PJ	3	1	0	30	70	3
6.	1505708	Internet of Things	PJ	4	0	0	30	70	3
7.	1505709	Software Testing Lab	PJ	0	0	3	50	50	2
8.	1505710	Internet of Things Lab	PJ	0	0	3	50	50	2
		Total:		22	2	6	280	520	22

### VIII SEM

S.No.	Subject Code	SUBJECT	SC	L	T	P	IM	EM	CR
1.	1505801	Software Project Management	PJ	4	0	0	30	70	3
2.	1505802	Ethical Hacking	PJ	4	0	0	30	70	3
3.	1525803	Management Science	PN	3	1	0	30	70	3
4.	1505804 1505805 1505806	CBCC-IV i. Digital Image Processing ii. Social Network Mining and Analysis iii. Soft Computing	PJ	4	0	0	30	70	3
5.	1505807	Technical Seminar	PJ	0	0	0	100	-	4
6.	1505808	Project Work	PJ	4	0	0	50	50	10
		Total:		19	1	0	270	330	26

  
**Dr. M. Sreenivasulu,**  
 M. E., Ph. D.  
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# K.S.R.M. COLLEGE OF ENGINEERING

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## Syllabus Comparison between R18UG and R15UG, AY 2018-19

Programme: B.Tech

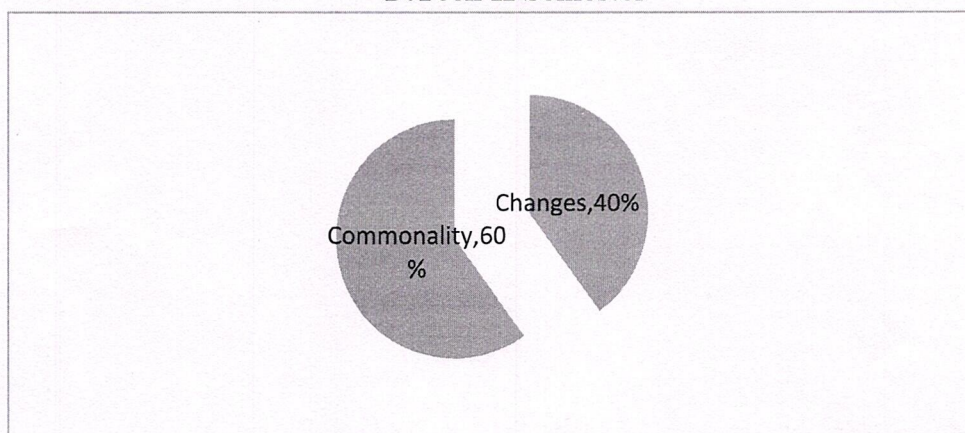
Branch: Computer Science & Engineering

### R18UG - II Semester

S.No	Course Code	Course Title	Percentage of change in R18UG compared to R15UG
1	1805204	Programming for Problem Solving	20
2	1805208	Programming for Problem Solving Lab	60
Average Percentage Changes in Curriculum (%)			40

Percentage change in R18UG Syllabus compared to R15UG Syllabus

B.Tech II Semester



### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	Dr. N. Ramanjaneya Reddy	Associate Professor	
4	Smt. B. Manorama Devi	Assistant Professor	

HoD/CSE

Dr. V. LOKESWARA REDDY

M.Tech., Ph.D.,

Professor & HOD CSE

K.S.R.M. College of Engineering (Autonomous)  
KADAPA - 516 005.



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**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**

**COURSE STRUCTURE AND SYLLABUS**

**FOR**

**B.Tech CSE (I Sem - VIII Sem) (R18 Regulations)**

**(Effective from 2018-19 for Regular students and from 2019-20 for  
Later Entry students)**



**KANDULA SREENIVASA REDDY MEMORIAL COLLEGE OF  
ENGINEERING (AUTONOMOUS)**

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## COMPUTER SCIENCE AND ENGINEERING

### I Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821101	BSC	Mathematics – I	3	1	0	30	70	4
1822104	BSC	Engineering Physics	3	1	0	30	70	4
1802103	ESC	Basic Electrical Engineering	3	1	0	30	70	4
1803107	ESC	Engineering Graphics & Design	1	0	4	50	50	3
1822108	BSC	Engineering Physics Lab	0	0	3	50	50	1.5
1802109	ESC	Basic Electrical Engineering Lab	0	0	2	50	50	1
1803110	ESC	Workshop and Manufacturing Practices	1	0	4	50	50	3
TOTAL			11	3	13	290	410	20.5

### II Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1821201	BSC	Mathematics – II	3	1	0	30	70	4
1823202	BSC	Engineering Chemistry	3	1	0	30	70	4
1824203	HSMC	English	2	0	0	30	70	2
1805204	ESC	Programming for Problem Solving	3	0	0	30	70	3
1823207	BSC	Chemistry Lab	0	0	3	50	50	1.5
1805208	ESC	Programming for Problem Solving Lab	0	0	4	50	50	2
1824209	HSMC	English Lab	0	0	2	50	50	1
TOTAL			11	2	9	270	430	17.5



Dr. M. Sreenivasulu,

M E, Ph. D.

Professor & HOD CSE

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### III Semester

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
18993M1	MC	Environmental Science (Mandatory Course-1)	2	0	0	30	--	0
1804302	PN	Basics of Electronics Engineering	3	0	0	30	70	3
1805303	PCC	Data Structures	3	0	0	30	70	3
1805304	PCC	Discrete Mathematics	3	0	0	30	70	3
1805305	PCC	Digital Logic Design	3	0	0	30	70	3
1805306	PCC	Python Programming	3	0	0	30	70	3
1825307	HSMC	Managerial Economics and Financial Accounting	3	0	0	30	70	3
1814311	PN	Basics of Electronics Engineering Lab	0	0	2	50	50	1
1805309	PCC	Data Structures Lab	0	0	3	50	50	1.5
1805310	PCC	Python Programming Lab	0	0	3	50	50	1.5
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>8</b>	<b>360</b>	<b>570</b>	<b>22</b>

### IV SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1823401	BSC	Biology for Engineers	2	0	0	30	70	2
1821402	BSC	Probability & Statistics	3	0	0	30	70	3
1805403	PCC	Computer Organization	3	0	0	30	70	3
1805404	PCC	Operating Systems	3	0	0	30	70	3
1805405	PCC	Design and Analysis of Algorithms	3	0	0	30	70	3
1805406	PCC	Java Programming	3	0	0	30	70	3
1805407	PCC	Formal Languages and Automata Theory	3	0	0	30	70	3
1805408	PCC	Java Programming lab	0	0	2	50	50	1
1805410	PCC	Operating Systems Lab	0	0	2	50	50	1
<b>TOTAL</b>			<b>20</b>	<b>0</b>	<b>4</b>	<b>310</b>	<b>590</b>	<b>22</b>



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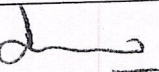


### V SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805501	PCC	Web Technologies	2	0	0	30	70	2
1805502	PCC	Data Base Management Systems	3	0	0	30	70	3
1805503	PCC	Computer Networks	3	0	0	30	70	3
1805504	PCC	Software Engineering	3	0	0	30	70	3
1805505 1805506 1805507	PEC	<b>Professional Elective-1</b> 1. Human Computer Interaction 2. Multimedia Systems 3. Distributed Systems	3	0	0	30	70	3
1805508	PCC	Compiler Design	3	0	0	30	70	3
1825509	PCC	Constitution of India	2	-	-	30	--	0
1805510	PCC	Databases Lab	0	0	2	50	50	1
1805511	PCC	Web Technologies Lab	0	0	2	50	50	1
1824512	HSC	Advanced English and Communications Skills lab	0	0	2	50	50	1
1805513	Project	Socially Relevant Project	0	0	4	100	--	2
<b>TOTAL</b>			<b>19</b>	<b>0</b>	<b>10</b>	<b>460</b>	<b>570</b>	<b>22</b>

### VI SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805601	PCC	Internet of Things	3	0	0	30	70	3
1805602	PCC	Data Mining	3	0	0	30	70	3
1805603 1805604 1805605	PEC	<b>Professional Elective-2</b> 1. Artificial Intelligence 2. Software Testing 3. Mobile Adhoc Networks	3	0	0	30	70	3
180E501 180E502	OEC	<b>Open Elective-1</b> 1. Data Structures 2. Database Management Systems	3	0	0	30	70	3
1825609	HSC	Management Science	3	0	0	30	70	3
1805608	PCC	Mobile Application Development	3	0	0	30	70	3
1805609	PCC	Internet of Things Lab	0	0	2	50	50	1
1805610	PCC	Mobile Application Development Lab	0	0	2	50	50	1
1805611	Project	Internship	--	--	--	100	--	2
<b>TOTAL</b>			<b>18</b>	<b>0</b>	<b>04</b>	<b>380</b>	<b>520</b>	<b>22</b>



Dr. M. Sreenivasulu,

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K.S.R.M. College of Engineering

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### VII SEMESTER

Subject Code	Subject Category	Course Name	L	T	P	IM	EM	CR
1805701	PCC	Machine Learning	3	0	0	30	70	3
1805702	PCC	Big Data Technologies	3	0	0	30	70	3
1805703 1805704 1805705	PEC	<b>Professional Elective-3</b> 1. Computer Graphics 2. Design Patterns 3. Cloud Computing	3	0	0	30	70	3
18OE503 18OE504	OEC	<b>Open Elective-2</b> 1. Python Programming 2. Computer Networks	3	0	0	30	70	3
18OE505 18OE506	OEC	<b>Open Elective-3</b> 1. Web Technologies 2. Operating Systems	3	0	0	30	70	3
1805710	PCC	Big Data Technologies Lab	0	0	2	50	50	1
1805711	PCC	Machine Learning Lab	0	0	2	50	50	1
1805712	Project	Technical Seminar	0	0	2	100	--	1
1805713	Project	Project-I	0	0	8	100	--	4
<b>TOTAL</b>			<b>15</b>	<b>0</b>	<b>14</b>	<b>450</b>	<b>450</b>	<b>22</b>

### VIII SEMESTER

Subject Code	Subject Category	Subject Title	L	T	P	IM	EM	CR
1805801 1805802 1805803	PEC	<b>Professional Elective-4</b> 1. Cyber Security 2. Object Oriented Analysis & Design 3. Deep Learning	3	0	0	30	70	3
18OE507 18OE508	OEC	<b>Open Elective-4</b> 1. Software Engineering 2. Cloud Computing	3	0	0	30	70	3
1805806	Project	Project-II	0	0	12	50	50	6
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>12</b>	<b>110</b>	<b>190</b>	<b>12</b>



Dr. M. Sreenivasulu,

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K.S.R.M. College of Engineering

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# K.S.R.M. COLLEGE OF ENGINEERING

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## DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

### Syllabus Comparison between R18PG and R14PG, A.Y 2018-19

Programme: M.Tech

Specialization: Computer Science and Engineering

Semester: I to IV

S.no	Course Code	Course Title	Percentage of change in R18PG compared to R14PG
1	1855101	Mathematical Foundations of Computer Science (Program Core-I)	100
2	1855102	Advanced Data Structures (Program Core-II)	60
3	1855103	Machine Learning (Program Elective-I)	100
4	1855104	Wireless Sensor Networks(Program Elective-I)	100
5	1855105	Introduction to Intelligent Systems (Program Elective-I)	100
6	1855106	Data Science (Program Elective-II)	100
7	1855107	Distributed Systems (Program Elective-I)	100
8	1855108	Advanced Wireless and Mobile Networks (Program Elective-I)	100
9	1800109	Research Methodology and IPR	100
11	1855110	Advanced Data Structures Lab	60
12	1855111	Software Lab-I	100
13	1855201	Mobile Applications and Services (Program Core-III)	100
14	1855202	Human Computer Interaction (Program Core-IV)	100
15	1855203	Internet of Things (Program Elective-III)	100
16	1855204	Data Preparation and Analysis (Program Elective-III)	100
17	1855205	Computer Vision (Program Elective-III)	100
18	1855206	Cloud Computing (Program Elective-IV)	100
19	1855207	Soft Computing (Program Elective-IV)	100
20	1855208	Digital Forensics (Program Elective-IV)	100
21	1855210	Mobile Applications and Services Lab	100
22	1855211	Software Lab-II	100
23	1855209	Mini Project with Seminar	100



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24	1855301	Big Data Analytics (Program Elective-V)	100
25	1855302	Compiler for High Performance Computing (Program Elective-V)	100
26	1855303	Advanced Algorithms (Program Elective-V)	100
27	1871304	Business Analytics (Open Elective)	100
28	1871305	Industrial Safety (Open Elective)	100
29	1871306	Operations Research (Open Elective)	100
30	1871307	Cost Management of Engineering Projects (Open Elective)	100
31	1871308	Composite Materials (Open Elective)	100
32	1871309	Waste to Energy (Open Elective)	100
33	1855310	Dissertation-I	0
34	1855401	Dissertation-II	0
35	1870A01	English for Research Paper Writing (Audit Course)	100
36	1870A02	Disaster Management (Audit Course)	100
37	1870A03	Sanskrit for Technical Knowledge (Audit Course)	100
38	1870A04	Value Education (Audit Course)	100
39	1870A05	Constitution of India (Audit Course)	100
40	1870A06	Pedagogy Studies (Audit Course)	100
41	1870A07	Stress Management by Yoga (Audit Course)	100
42	1870A08	Personality Development through Life Enlightenment Skills (Audit Course)	100
<b>Average Percentage Changes in Curriculum (%)</b>			<b>93.33</b>



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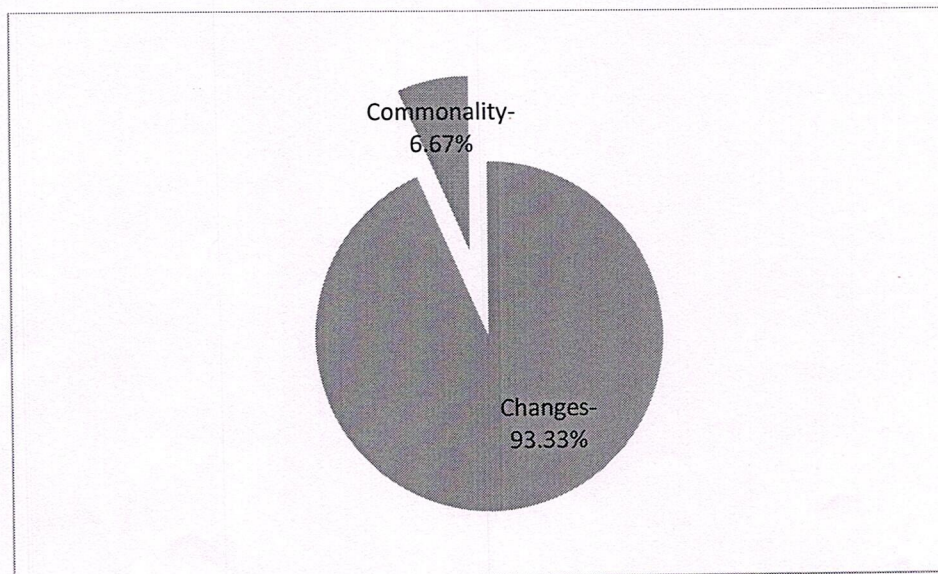


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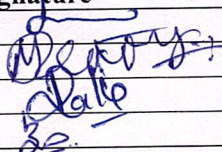


## Percentage change in R18PG Syllabus compared to R14PG Syllabus

### M.Tech I to IV Semesters



#### Internal Evaluation Committee:

S.No	Name of the Faculty	Designation	Signature
1	Dr.M.Sreenivasulu	Professor & HOD	
2	Dr.V.Lokeswara Reddy	Professor	
3	M.V.Rathnamma	Associate Professor	
4	B.Manorama Devi	Assistant Professor	



HoD/CSE

**Dr. M. Sreenivasulu,**

M. E., Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

KADAPA - 516 003



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# **ACADEMIC REGULATIONS (R18)**

## **COURSE STRUCTURE AND DETAILED SYLLABUS**

### **MASTER OF TECHNOLOGY IN COMPUTER SCIENCE & ENGINEERING**

**For**

**M.Tech.- Regular Two Year Post Graduate Degree Programme**  
(Applicable for the batches admitted from 2018-19)



**KANDULA SRINIVASA REDDY MEMORIAL COLLEGE OF  
ENGINEERING  
(UGC-Autonomous)  
Kadapa 516003, A.P**

(Approved by AICTE, Affiliated to JNTUA, Ananthapuramu, Accredited by NAAC)

(An ISO 14001:2004 & 9001: 2015 Certified Institution)

E-mail: [principal@ksrmce.ac.in](mailto:principal@ksrmce.ac.in)

Website: [www.ksrmce.ac.in](http://www.ksrmce.ac.in)

**M.Tech. (Computer Science & Engineering)-R18 Course Structure**



### M.Tech SEMESTER-I

S.No	Subject Code	Subject	L	T	P	IM	EM	Credits
1	1855101	<b>Program Core-I</b> Mathematical foundations of Computer Science	3	0	0	40	60	3
2	1855102	<b>Program Core-II</b> Advanced Data Structures	3	0	0	40	60	3
3	1855103 1855104 1855105	<b>Program Elective-I</b> I. Machine Learning II. Wireless Sensor Networks III. Introduction to Intelligent Systems	3	0	0	40	60	3
4	1855106 1855107 1855108	<b>Program Elective-II</b> I. Data Science II. Distributed Systems III. Advanced Wireless and Mobile Networks	3	0	0	40	60	3
5	1800109	Research Methodology and IPR	2	0	0	40	60	2
6	1870AXX	Audit Course-I	2	0	0	40	00	0
7	1855110	Advanced Data Structures Lab	0	0	4	50	50	2
8	1855111	Software Lab-I	0	0	4	50	50	2
Total			16	0	8	340	400	18



Dr. M. Sreenivasulu,

M. E., Ph. D.

Professor & HOD CSE

K.S.R.M. College of Engineering

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### M.Tech SEMESTER-II

S.No	Subject Code	Subject	L	T	P	IM	EM	Credits
1	1855201	<b>Program Core-III</b> Mobile Applications and Services	3	0	0	40	60	3
2	1855202	<b>Program Core-IV</b> Human Computer Interaction	3	0	0	40	60	3
3	1855203 1855204 1855205	<b>Program Elective-III</b> I. Internet of Things II. Data Preparation and Analysis III. Computer Vision	3	0	0	40	60	3
4	1855206 1855207 1855208	<b>Program Elective-IV</b> I. Cloud Computing II. Soft Computing III. Digital Forensics	3	0	0	40	60	3
5	1870AXX	Audit Course-II	2	0	0	40	00	0
6	1855210	Mobile Applications and Services Lab	0	0	4	50	50	2
7	1855211	Software Lab-II	0	0	4	50	50	2
8	1855209	Mini Project with Seminar	2	0	0	50	50	2
Total			14	0	8	350	340	18



Dr. M. Sreenivasulu,

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### M.Tech SEMESTER-III

S.No	Subject Code	Subject	L	T	P	IM	EM	Credits
1	1855301 1855302 1855303	<b>Program Elective-V</b> I. Big Data Analytics II. Compiler for High Performance Computing III. Advanced Algorithms	3	0	0	40	60	3
2	18713XX	Open Elective	3	0	0	40	60	3
3	1855310	Dissertation-I	0	0	20	100	00	10
Total			6	0	20	180	120	16

### M.Tech SEMESTER-IV

S.No	Subject Code	Subject	L	T	P	IM	EM	Credits
1	1855401	Dissertation-II	0	0	32	50	50	16
Total			0	0	32	50	50	16

### AUDIT COURSES

S.No	Subject Code	Subject
1	1870A01	English for Research Paper Writing
2	1870A02	Disaster Management
3	1870A03	Sanskrit for Technical Knowledge
4	1870A04	Value Education
5	1870A05	Constitution of India
6	1870A06	Pedagogy Studies
7	1870A07	Stress Management by Yoga
8	1870A08	Personality Development through Life Enlightenment Skills

### OPEN ELECTIVES

S.No	Subject Code	Subject
1	1871304	Business Analytics
2	1871305	Industrial Safety
3	1871306	Operations Research
4	1871307	Cost Management of Engineering Projects
5	1871308	Composite Materials
6	1871309	Waste to Energy



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# K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India- 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

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## Department of Humanities & Sciences

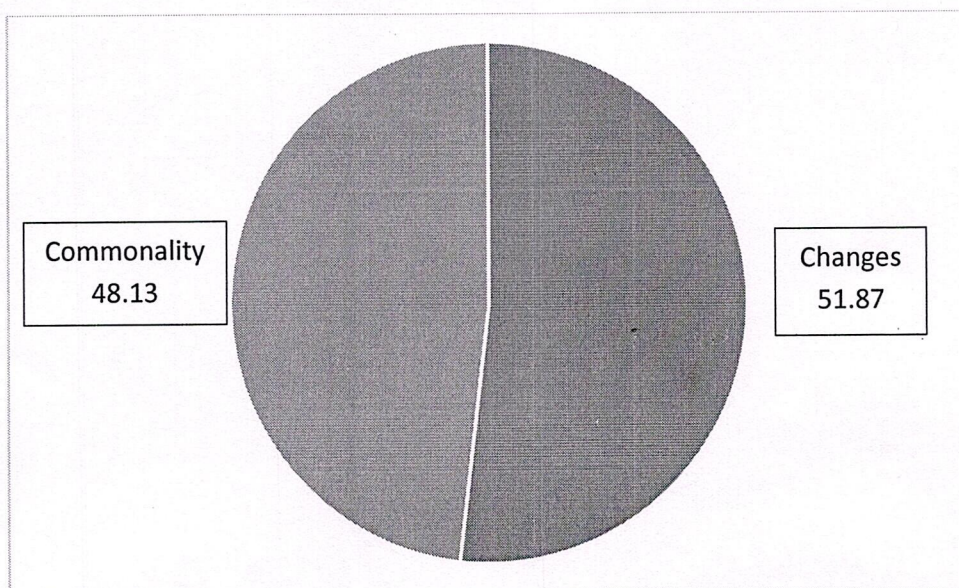
### Programme: B. Tech

### Syllabus comparison between R18UG and R15UG (A.Y.2018-19)

S.no	Course Title	Course/Subject code	Department	Percentage of change in R18UG compared to R15UG
<b>Semester: I &amp; II</b>				
1.	Mathematics-I	1821101	All Branches	70
2.	Engineering Chemistry	1823102/1823202	CE,ME,EEE/ ECE, CSE	70
3.	Engineering Physics	1822102/1822202	ECE, CSE/CE,ME,ECE	40
4.	English	1824103/1824203	CE,ME,EEE/ ECE,CSE	30
5.	Chemistry Lab	1823107/1823207	CE,ME,EEE/ ECE,CSE	75
6	Engineering Physics Lab	1822108/1822208	ECE, CSE/CE,ME,EEE	40
7	English Lab	1824109/1824209	CE,ME,EEE/ ECE,CSE	40
8	Mathematics-II	1821201	All Branches	50
Average % change in curriculum				415/8 = 51.87

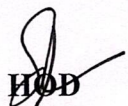


## Percentage change in R18UG compared to R15UG (A.Y.2018-19)



### Internal Evaluation Committee:

S.NO	Name of the faculty	Designation	Signature
1.	Dr. B. Rama Bhupal Reddy	Professor	B. Ramu
2.	Dr. I. Sreevani	Associate Professor	I. Sreevani
3.	Sri. N. Bhaskara Reddy	Assistant Professor	N. Bhaskara Reddy
4.	Sri. M. Ravi Sankar Reddy	Assistant Professor	M. Ravi Sankar Reddy

  
**Dr. I. SREEVANI** M.Sc., Ph.D  
 Head of Humanities & Sciences  
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